

Economics
1st year

YEAR
AGO
←

WEEK
AGO
←

BUSINESS WEEK

←
START
OF
WAR
1939



Soon they can be sold. But until OPA approves prices on new cars (page 15) would-be buyers can only look.

INNESS
EK
EX

TWENTY CENTS • PUBLISHED BY THE MCGRAW-HILL PUBLISHING CO.

UNIVERSITY OF MICHIGAN
GENERAL LIBRARY
ALAN ARBOR MICH

"The worst crime against working people is a company which fails to operate at a profit"

A great labor leader made this statement. He knew that unless a company can make money it will be forced out of business—and an idle factory supplies no jobs; a prosperous factory supplies more and more jobs at better and better pay.

*Three groups share equally the much-discussed
responsibility for jobs:*

1—Government. Its regulations and tax laws must enable companies to save enough money to provide workmen with constantly improved equipment without which this country can never compete in the world-wide competition for trade.

2—Management. It must provide the improved equipment, and honestly share with its workmen the increased earnings which result.

3—Labor. It must use the equipment efficiently because a man can be paid only out of what he produces. Therefore, if he wants to earn more, he must produce more, efficiently—and improved equipment is the only way he can do it.

Government can't legislate jobs, management can't invent them, labor can't force them . . . but all three, *working together*, can develop them.



YOU CAN MACHINE IT BETTER, FASTER, FOR LESS WITH WARNER & SWASEY TURRET LATHES AND TAPPING MACHINES



Here comes a blue star turned into a blue chip

THE sooner those boys step off your service flag (or someone else's) into your business, the sooner you're going to have a new lift, unlike anything you've had for years.

Employee training? They're the finished products of the greatest program of finding and developing men this world ever saw.

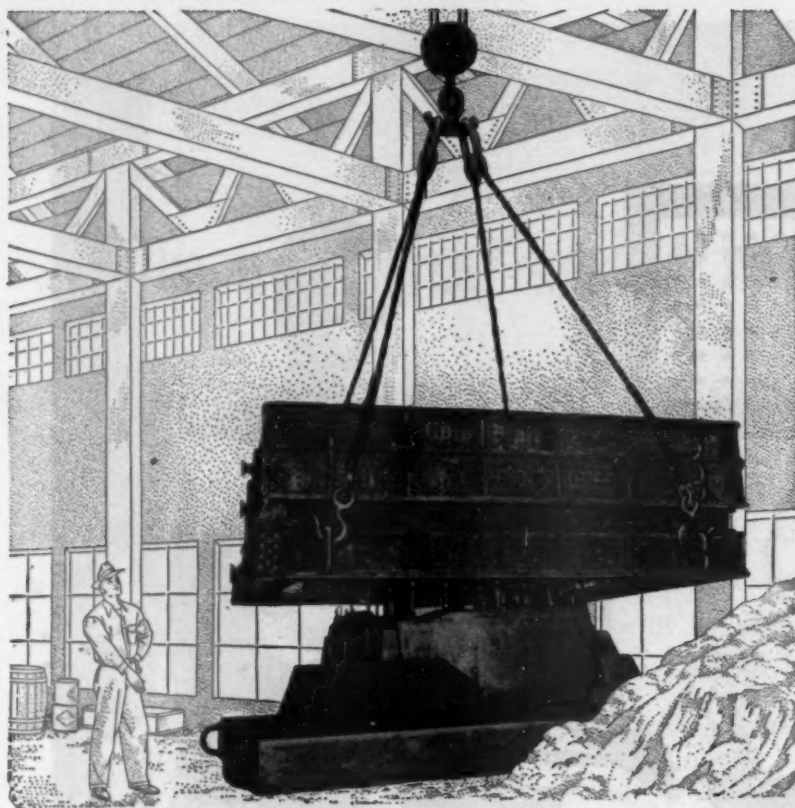
Morale getting a little low around the place? A few of these lads with their eagerness to get back and get ahead will snap it up in a hurry.

Discipline a little lax? These boys are the essence of discipline at its best. And they'll *keep* it, because they know they could not coast on their war jobs—they must *progress* on their peace jobs.

There are men with practically every skill you could possibly want, *and we mean skill*. Those skills are good enough to lick the toughest job the world ever saw. Use them to help you lick the business problems ahead.

These men are blue chips.

Published in cooperation with the War Advertising Council with the gratitude and pride all Americans feel for our fighting men
—by The B. F. Goodrich Company.



A pattern for safety...

—not only in the foundry but throughout industry—
is suggested by the above method of handling a heavy load.

Those flexible Yellow Strand Braided Safety Slings are providing increased three-way protection: for experienced personnel... the products of their skill... tight delivery schedules.

★ Full partner with the slings in the national program to "Stop Accidents," Yellow Strand Preformed Wire Rope supplements inbred toughness with extra fatigue-resistance and smooth-running pliability. Employees use such a rope with confidence. By teaming preformed rope and braided slings on the same job, you tool up for high work capacity.

Remember the name: Yellow Strand. Remember the patented constructions: Preformed Wire Rope and Braided Safety Slings.

Broderick & Bascom Rope Co., St. Louis

Branches: New York, Chicago, Houston, Portland, Seattle. Factories: St. Louis, Seattle, Peoria

**YELLOW
STRAND**



PREFORMED WIRE ROPE • BRAIDED SAFETY SLINGS

BUSINESS WEEK

WHERE TO FIND IT

Business Abroad	11
Finance	11
General News	11
The International Outlook	11
Labor	11
The Labor Angle	11
Marketing	11
The Markets	11
The Outlook	11
Production	11
The Trading Post	11
The Trend	11
Washington Bulletin	11
The Pictures—Charles Phelps Cushing, cover	
Harris & Ewing, 16, 80; Int. News, 21, 32, 50	
Acme, 32, 94, 99; Wide World, 38, 105; U. S.	
Navy, 48; Sovfoto, 106; Trans-Canada Airlines	
113; British Combine, 114.	

EDITOR
Ralph Smith

MANAGING EDITOR
Louis Engel

ASSISTANT MANAGING EDITORS
John M. Johnston, Clark R. Pace

NEWS EDITORS
Wayne Jordan, Henry R. Lamar, Harold S. L. Polt, Raymond A. Dodd (Illustration)

STAFF EDITORS
Foreign, John F. Chapman • Business Policy, John L. Cobbs • Production, W. W. Dodge • Law, J. A. Gerardi • Finance, W. McKee Gillingham • Labor, Merlyn S. Pitzelle • Industry, James M. Sutherland • Marketing, Phyllis White • Washington, Irvin D. Foos

EDITORIAL ASSISTANTS
Cora Carter, Brownlee Haydon (Assistant Foreign Editor), John Hoffman, Richard M. Machol, Mary Richards (Assistant Marketing Editor), Arthur Richter, Margaret Timmerman, E. T. Townes (Assistant Labor Editor), Doris I. White • Statistician, Abraham Stein • Librarian, Patricia Burt

ECONOMIC STAFF
Stacy May, Dexter M. Keezer, Sanford S. Parker, William F. Butler

EDITORIAL BUREAUS
Chicago, Arthur Van Vlissingen, Joseph C. Green, Mary B. Stephenson • Cleveland, Robert H. Cochran • Detroit, Stanley H. Brams • San Francisco, Richard Lamb • Washington, McGraw-Hill Bureau (Irvin D. Foos, Thomas A. Falco, Stuart Hamilton). Staff Correspondents throughout the United States, and in Canada, Latin America, Great Britain, U. S. S. R.

PUBLISHER
Paul Montgomery

BUSINESS WEEK • SEPTEMBER 1 • NUMBER 15
(with which is combined The Annalist and the Magazine of Business). Published weekly by McGraw-Hill Publishing Company, Inc., James H. McGraw, Founder and Honorary Chairman, Publication Office 99-129 North Broadway, Albany 1, N. Y. Editorial and Executive Offices, 330 W. 42nd St., New York 18, N. Y. James H. McGraw, Jr., President; Curtis W. McGraw, Senior Vice-President and Treasurer; Howard Ehrlich, Vice-President and General Manager; William Chevalier, Vice-President and Editorial Assistant; the President; Joseph A. Gerardi, Secretary. Also subscriptions address: J. E. Blackburn, Jr., Director of Circulation, Business Week, 330 West 42nd St., New York 18, N. Y. Allow ten days for change of address. Subscription rates—United States, Mexico and Central and South American countries \$5.00 a year. Canada \$6.00 for a year. Entered as second class matter December 4, 1934 at the Post Office at Albany, N. Y., under the Act of March 3, 1879. Return postage guaranteed. Printed in U. S. A. Copyright 1945 by McGraw-Hill Publishing Company, Inc. All Rights Reserved.

WHAT CONGRESS FACES

A Congress that is more concerned about getting men out of uniform than what they will do when they get home will be back in Washington next week.

President Truman has laid on congressional desks several measures intended to cushion the transition to a well-blown peacetime economy, but indications are that they will move very slowly through the Senate and House.

Congressmen intent on speeding up mobilization are not pleased by Truman's warning that continuation of the draft is a necessary adjunct. But there isn't much that they can do about it, apart from attaching age and other limitations.

Some politicians find comfort in the fact that the votes of veterans and their families run into much bigger figures than those that will be lost by extension of the draft. The unpleasant necessity of extending the draft practically dooms peacetime compulsory military training in any form, however.

Fights Are Brewing

The "war's over" attitude on Capitol Hill presages a lot of wrangling:

On the Full Employment Bill: Current hearings have defined the issue. Will the federal government "guarantee" full employment or merely promise? Odds today appear to favor the promise.

A side fight is brewing over public works. The Budget Bureau this week, probably in anticipation of the full employment bill, suggested that Congress postpone putting up the cash for several billions of dollars of works, which have already been authorized, until a definite program can be developed coordinating public works with unemployment. A sizable congressional bloc intends, however, to press for some early appropriations to get highway, food control, and other projects under way.

On Unemployment Compensation: Truman's proposal that the federal government raise the ante to \$25 for 26 weeks for jobless war workers will set spark to the slumbering states' rights issue. (The states administer, under their individual laws, the federally collected funds.) Return of the U. S. Employment Service to the states is in the same category. Truman's extempore promise to state governors that this would be one took federal officials by surprise. They are building a backfire.

On War Surplus Disposal: Congress probably will comply fairly soon with Truman's request for revamping of the 1944 Surplus Property Act to vest responsibility and authority in a single administrator, instead of a board. The Senate successfully fought off this suggestion when the original bill was under consideration, but many members are now convinced that the present setup is a failure.

PROMISED, BUT HOW?

Republicans as well as Democrats are over the barrel on farm policy, since the commitment to support prices for two years after Jan. 1 following the legal end of the war will run through both next year's congressional and the 1948 presidential elections.

The Agriculture Dept. already owns \$1,400,000,000 of farm commodities acquired for lend-lease and price support. Principal current resources are Commodity Credit Corp. balances now totaling less than \$1,000,000,000.

Congress will be asked this session (1) to swell the CCC bankroll, or (2) to make specific appropriations to support prices, or (3) to accept a substitute plan of farm income payments (BW—Aug. 25 '45, p. 21).

Preference of some officials is to take CCC out of the buy-sell price support business, make it strictly a farm loan mechanism, let price supports stand on their own feet through separate appropriations.

Meanwhile, Secretary Clinton P. Anderson won't get far trying to get military help to foot the bill on prospective losses on current stockpiles. Anderson bases his claim on the ground that agriculture was expanded largely to supply the armed forces.

CONSPICUOUS FALLACY

Army Service Forces officers wonder whether they'll ever hear the last of their now-famous bull in announcing that the Japanese surrender would free 145,000,000 tons of coal within a year.

The figure was obtained by comparing the dollar value of ASF cutbacks with the dollar value of national income in which coal played any part—manufacturing, rail transport, power, etc. The resulting ratio—54%—was applied to the 1944 use of coal which went into the same activities that produced the national income.

Thus, the 145,000,000-ton saving of coal assumed a 54% decrease in railroad use, electric power, steel production, and all the rest, making no provision whatsoever for reconversion.

NWLB'S NEW ROLE

So-called agreement between the Labor Dept. and the National War Labor Board on handling new disputes is a makeshift arrangement which leaves Secretary Lewis Schwellenbach's hands completely free.

The board, or at least a majority, would prefer to process only cases in which it is stipulated that the parties will accept the board's decision. Schwellenbach pledged his Conciliation Service to cooperate in getting such stipulations—up to a certain point. He declines to push disputants into them.

Schwellenbach also declines to withhold disputes from NWLB where stipulations are not forthcoming. He insists that President Truman's executive order (BW—Aug. 25 '45, p. 15) requires him to certify any dispute that interferes with reconversion or production of military supplies.

NWLB thus is reduced to a voluntary arbitration agency.

RAPPROCHEMENT

One of the surest portents that John L. Lewis and his miners are on their way back to the A.F.L. was visible for all at the full employment bill hearings Tuesday, where Lewis and the man he expelled from the miners' union eight years ago, A.F.L. President William Green, shook hands and actually beamed upon each other.

Green, who testified first, paid Lewis the courtesy of remaining to hear him address the committee. The miners' chief, always a gallery favorite, packed the hearing room. When he finished, the crowd evaporated.

Lewis could have gone back to the A.F.L. six months ago, but he held out for a seat on the executive council, too. There's no vacancy at the moment, but the first death or resignation means Lewis is elected.

CONTRACT TERMINATION

The machinery for contract termination is well-oiled. Before Japan threw in the sponge, more than 165,000 con-



This is no Alchemist's dream

Alchemists of old, in long, labored attempts, tried vainly to change common ores to precious metals.

While Duramold hasn't changed lead to gold, in essence, Duramold's engineers have achieved the alchemists' goal. They impart new character to common materials.

In light, pliant materials—cloth, paper, glass fiber, wood veneers, cellular rubber and many others—the Duramold process *creates* a backbone of strength. Laminations of these materials are bonded with thermosetting resins under heat and pressure, frequently using synthetic, lightweight core materials between laminations.

Duramolding gives them new qualities. Their pliancy is gone. They assume rigid strength, molded to precise

specifications in intricate and complexly curved patterns.

Here, then, in an industry now devoted entirely to production for the Air Forces, lies the promise—and the reality—of new materials for builders of peacetime products. Here, as in all Fairchild research and engineering, lies "the touch of tomorrow."

YOUR PRODUCT—AND DURAMOLD. Your need for strong, lightweight materials—for parts impervious to extremes of weather, fungi or corrosives—may well find its answer at Duramold. Fairchild engineers are specialists in exploring the possibilities for new applications of Duramolded materials. For further detailed information about Duramold, send a letter on your business stationery. Write Department 1.

 **FAIRCHILD**

ENGINE AND AIRPLANE CORPORATION
30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

Ranger Aircraft Engines Division, Farmingdale, L. I.

Fairchild Aircraft Division, Hagerstown, Md.

Duramold Division, Jamestown, N. Y.

Subsidiary: Al-Fin Corporation, Jamaica, L. I., N. Y.

Affiliate: Stratos Corporation, Babylon, L. I., N. Y.

ets with a face value of some \$37-0,000,000 had been canceled, and 2,000,000,000 of this total had been settled. The War Dept., by far the largest contracting agency, was settling terminations in an average of 24 months, twice as fast as the average months ago.

Financing arrangements are adequate. For prompt settlement of V-J contract terminations, it's up to contractors to file their claims without delay. The existing method of clearing inventories and equipment from demobilized plants, as required by law (within 60 days), came through the VE Day rush with flying colors. Because storage space for government-owned equipment is tight, the Reconstruction Finance Corp. is working up a fee system whereby former war contractors would be paid for storing it on the spot.

VACANCIES IN THE FTC

The death of Col. Charles H. March of Minnesota, member of the Federal Trade Commission since 1929, and the expiration of the term of Robert E. Freer of Ohio give President Truman an opportunity to name two Republicans to the bipartisan five-man tribunal within the next few weeks. Col. March died Aug. 27. The line-up of the commission had stood intact for exactly ten years. Freer, the freshman, was appointed Aug. 27, 1935.

Some quarters say Truman would already have reappointed Freer, had he intended to do so, but the FTC act provides for continuance in office until a successor has been nominated and qualified, so Freer will carry on in the interim.

New Blood—And Votes

With Truman's emphasis on new blood, and with political exigencies in the background, he is expected to name men who not only will refresh the somewhat fusty commission but who come from states where the appointment of Republicans will tend to garner votes for Democrats.

FTC is currently under fire in Congress, where a reform bill by Rep. B. Carroll Reece (R., Tenn.) is pending. Hearings to be held this fall or winter are expected to air a long list of complaints against the commission's performance in the triple role of prosecutor, judge, and jury. Unlike some of the so-called "administrative procedure" bills, the Reece measure would not break

up the combination but would subject FTC findings to review by the appellate courts (BW—Mar. 24 '45, p. 85).

PIOUS HOPE

Priorities Regulation 32, issued this week by WPB to provide over-all, uniform inventory control, will amount to

little more than a "pious hope" that there will be no hoarding of materials, some WPB men admit. The rule has no requirement for reporting inventories by which WPB could get a line on what actually is being bought, delivered, and held.

Investigation, pressure, and specific directive orders can be brought to bear on violators, of course, but the prob-

More Seats at Cabinet Table?

Government reorganization probably will wind up with the creation of one or more new departments. The number and their makeup will depend finally on President Truman and Congress. Truman wants a tighter organization, run by a "board of directors" which, when it sits down around the cabinet table, represents the whole executive establishment, without crowding.

As it is now, numerous independent agency chiefs, in addition to department heads, attend cabinet meetings more or less regularly. But it's not likely that the whole range of federal activities can be squeezed into the ten regular departments. Consequently, the Budget Bureau is mulling over several plans for a half-dozen or so new departments:

Public Welfare: This would raise the Federal Security Agency to cabinet status and also include the Women's Bureau and Children's Bureau of the Labor Dept. The Budget Bureau also favors inclusion of the U. S. Employment Service and the Unemployment Compensation Bureau of Social Security, but Secretary of Labor Lewis Schwellenbach has his eye on these, and it's a good bet that he will get both.

Transportation—Communications: To include Interstate Commerce Commission, Federal Communications Commission, and Maritime Commission; and take over from the Commerce Dept., the Civil Aeronautics Administration, Civil Aeronautics Board, Inland Waterways Corp., and possibly the Coast & Geodetic Survey and the Weather Bureau. This might be reversed, with the Commerce Dept. becoming the hub but, in any case, it's doubtful if Congress will permit the ICC and FCC to be touched.

Public Works: This would raise the Federal Works Agency to cabinet status, and also include the civilian construction work of the Army Corps of Engineers, and the housing construction work of the National Housing Agency.

Public Enterprises: This would include Tennessee Valley Authority, Bonneville, Grand Coulee, and other projects; possibly the Inland Waterways Corp. if a Transportation Dept. isn't set up. Secretary of the Interior Harold Ickes and others are strenuously opposed.

Loans: This would raise the Federal Loan Agency to cabinet status and expand it to include housing, and most of the government's other lending activities, except those connected with agriculture.

Veterans: Reincarnation of the Veterans Administration giving it political oomph, but the Budget Bureau apparently doesn't favor this change.

National Defense: A merger of the armed services indicated by this war's experience.

Administration (or Service): This would include the Civil Service Administration, the Treasury Dept.'s Procurement Division, and numerous other administrative units, but the Budget Bureau wants none of it if the bureau itself is included.

Old-line departments also have their eyes on other departmental units and independent agencies. At the moment it's a chess board on which the Budget Bureau is pushing pieces around in arriving at its recommendations to Truman, and Truman's own hands will be tied by Congress to some extent. Better organization will result eventually, but isn't likely to stop the government's growing pains.

THE NEW WILLSON

FeatherSpec



TO SOLVE THE PROBLEM
OF KEEPING SAFETY
SPECTACLES ON WORKERS
IN SEMI-HAZARDOUS JOBS

● FEATHERSPEC makes real safety news; weighs less than an ounce; much lighter than other types. Large one-piece plastic lens; can be replaced in ten seconds; held firmly in "suspension-lock" frame; in clear or Willson Tru-Hue* green. FeatherSpec means real economy; costs less; can be worn over regular glasses; saves cost of special prescription spectacles. FeatherSpec provides new convenience; new comfort; so workers will wear it all day long; for light grinding, spot welding, wood-working and so forth.



See your Willson Distributor
or write to Dept. BW-7.



*Pat. Applied For ★T. M. Reg. U. S. Pat. Off.

GOGGLES • RESPIRATORS • GAS MASKS • HELMETS

WILLSON

PRODUCTS INCORPORATED
READING, PA., U. S. A. Established 1870

lem will be to discover violations, with no evidence.

Many men at WPB's working level doubt, however, that there will be much hoarding. They say it's not apparent in several industries which have been free of inventory reporting requirements for some time.

HIDDEN ASSETS?

Secretary of Agriculture Clinton P. Anderson's reorganization of his department along commodity lines is brushing away quite a bit of dust.

Odd lots of commodities—some plentiful, some scarce, such as vitamins, tomato paste, and black pepper—are showing up all over the place with incomplete records of why they were bought, the prices paid for them, or their current condition.

Anderson has put pressure on his new commodity chiefs to round up all stocks for unloading while the domestic demand is still good.

CAPITAL GAINS (AND LOSSES)

Washington will be the home both of the World Bank and of the Monetary Fund. The money will come from this country, and the State Dept. wants to keep an eye on loan negotiations.

Harold Ickes will remain Secretary of the Interior indefinitely because (1) he did not seek to "clarify" his position as did Secretary of the Treasury Henry Morgenthau; (2) President Truman, an ex-senator who remembers Warren Harding, relies on Ickes' integrity in the administration of oil and other natural resources.

Fleet Admiral William D. Leahy, chief of staff to the late President Roosevelt, never had much confidence in the atomic bomb. The Navy is hopeful that it has the answer to the atomic explosive (so long as it is used in bomb form) in a radar-controlled gun capable of bringing down a plane coming within 50,000 ft. of a battleship.

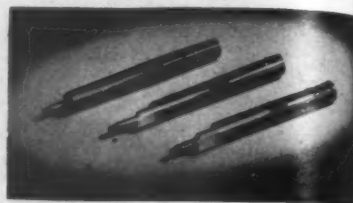
—Business Week's
Washington Bureau

THE COVER

Interest in the new cars, like the Oldsmobile exhibited this week on New York's Automobile Row, has been keen but necessarily unsatisfied, for the new cars couldn't be sold till OPA fixed price ceilings. Now the formula has been set (page 15) and it remains only for each manufacturer to compute the dollar-and-cents ceilings for his various models and get OPA's approval.

PRECISION PARTS

THREE STEPS TOWARD VICTORY



Fast communication between fighting-units gives the all-important coordination that often means the difference between success and failure. These tiny rotor-shafts are a vital part of an Army generator that develops the "juice" to send the messages back and forth.

Stainless steel bar-stock is centerless-ground to a tolerance of .0005". Next, the blanks are machined in automatic screw machines, the knurl being held to .002" on the outside diameter. The flats are straddle-milled and the shaft is completed by thread-grinding the worm.

This is typical of Ace work on small, accurate parts and assemblies involving stamping, machining, heat treating, and grinding. You'll find Ace facilities and abilities offer many advantages. Send sample, sketch, or blueprint for quotations.

CURRENT CAPACITY AVAILABLE

CYLINDRICAL GRINDING—Multiple banks of widely varying internal and external cylindrical grinders are available for outside diameters up to 12" by 24" between centers... and inside diameters as small as 1/8" or as large as 4" by 2 1/4" long.

THREAD GRINDING—Our battery of Ex-Cell-O and J & L Thread Grinders equip us to give you tolerances of .0001" on all Standard V Threads, Acme and Square Threads, and on single or multiple leads. All sizes up to 5" diameter with threads 8" long, on parts up to 20" between centers.



ACE MANUFACTURING CORPORATION

for Precision Parts



1211 E. ERIE AVE., PHILADELPHIA 24, PA.

THE OUTLOOK

BUSINESS WEEK
SEPTEMBER 1, 1945



Corporate profits stand to be surprisingly good in 1946. The total isn't likely to fall far short of \$8,000,000,000 after federal taxes and it might quite conceivably top 1944's \$10,000,000,000 by a slight margin.

The higher figure could be registered even though any conservative forecast must allow for a drop from 1944 of 25%-30% before taxes.

Predicting profits can't be an exact science, but there clearly should be some sort of relationship between sales and net before taxes. The Dept. of Commerce has worked out a formula which holds a good deal of promise.

Business Week has used that formula in its estimate of 1946 profits.

The estimate is based on the belief that corporations will have slightly more to sell in 1946 than in 1941 (BW—Aug. 18'45, p15). Dollar returns will be well above 1941 due to increased prices.

This should mean a gross national product of \$160,000,000,000 to \$165,000,000,000.

On this basis, total corporate income before taxes should be about \$17,000,000,000, down \$8,000,000,000 from 1944. (Due to fixed expenses, income drops faster than sales percentagewise.)

But, remember, with Uncle Sam taking such a deep bite through taxes, the tax bill declines almost as fast as income. Thus net after taxes doesn't go down in proportion to earnings before taxes.

Corporate income before taxes of \$17,000,000,000 should leave something more than \$8,000,000,000 clear if the excess-profits tax remains in full force. If that tax is repealed, as is very likely, then 1946 income should be \$10,000,000,000 or even a little bit higher.

Thus we get this picture: **Gross national product down 20% from 1944; profits before taxes down 30%; profits after paying normal and excess-profits taxes down 16%; profits after taxes, if the excess-profits tax is repealed, as high as in 1944 or up perhaps as much as 4%.**

High wages and relatively low ceiling prices will squeeze a lot of companies when it comes to splitting up 1946 income.

Yet, even if there is some over-all pinch, the national economy has an amazing way of averaging out. If one line of business doesn't get its full share of total profits, some other probably will.

If the free-spending habit results in a 1946 gross national product of \$160,000,000,000 to \$165,000,000,000, then some line such as building contracting or restaurants is apt to make more though the automobile or the refrigerator manufacturer makes less due to price-wage squeezes.

Dividends next year almost certainly will be higher if income after taxes should come up to 1944's \$10,000,000,000 mark.

Wartime dividends have been low due to the need for conserving cash to take care of (1) the unforeseeable, and (2) inevitable reconversion costs. The average for all corporations in 1944 was under 50% of income.

Wall Street looks for a peacetime average between 65% and 75%.

Washington has revised its ideas on the outlook for business in the next few months.

An interdepartmental committee of economists, who do the deep delving for the reconversion high command, figured (in advance of final victory)

ABLE

Multiple
land
are
s up
...
all as
long.
ry of
rind-
ances
eads,
nd on
es up
long,
aters.

RATION

24, PA

THE OUTLOOK (Continued)

BUSINESS WEEK
SEPTEMBER 1, 1945

that the end of the war in August would mean a decline in gross national product that would drag out for perhaps a year and a half.

But munitions cutbacks have been much faster and deeper than they expected when they made the estimate. Now they agree that the drop will be sharp—15% to 20%—in the last quarter of this year but that it will be arrested early in 1946.

From there on, the forecasts of the individuals vary. Views run all the way from a mild recovery as the public fills unsatisfied needs to a substantial boom getting under way in the latter part of 1946.

The probable peak in unemployment during the transition from war to peace will be higher than previously expected.

This arises from the speedup in Army and Navy discharges, not from any deterioration in the outlook for business activity.

The Army first said that it would release between 5,000,000 and 5,500,000 within 12 to 18 months. This week it told Congress it would cut its strength by 5,500,000 (net) by next July 1.

The Navy first said it would release 1,500,000 to 2,500,000 in a year to 18 months. Now the figure is nearly 2,900,000 in a year.

Although the editors of Business Week had expected demobilization "of the maximum number in the minimum time" (BW—Aug. 18'45, p9) in putting the transition unemployment peak at 8,000,000, the new timetable casts a different light on the situation.

The top now looks closer to 9,000,000 than 8,000,000. Yet this doesn't mean fewer jobs; it just means more job-seekers.

That construction is still one of the softest spots in the 1946 outlook is emphasized by the presumably expert estimates of the Federal Works Agency (page 21) which places building volume at only \$6,500,000,000.

In 1940, the figure was \$7,000,000,000 and in 1941 it was \$10,800,000,000. Moreover, 1946 costs are materially higher than in 1940 and 1941, making the forecast for 1946 just that much more gloomy in terms of jobs.

If the 1946 gross national product fails to hit \$160,000,000,000 to \$165,000,000,000, construction's slow start will be a major factor.

Yet there are some in the industry who feel FWA's \$1,500,000,000 for private residential construction is much too low. They doubt that lumber, for example, will be the stumbling block it has been pictured.

Crating, boxing, and dunnage have been taking more than 15,000,000,000 b.ft. a year at peak wartime demand. If this were to fall back to the 1941 level, more than 10,000,000,000 b.ft. would be released.

And 10,000,000,000 b.ft. would be only 20% short of record 1926 use for housing when a million residential units were built.

Demand for chicks has so stimulated commercial hatchery production that this fall may see a surplus rather than the spring and summer shortage. (Ending the Army set-aside this week will serve to accentuate this situation.)

Demand for chicks has continued far beyond the usual season, July output being three times that of July, 1944, and setting a new record.

Hatchery production for the first seven months of this year ran 20% above last; the 1945 gain in chickens raised on farms is put at 8%.

FIGURES OF THE WEEK

	\$ Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
THE INDEX (see chart below)	*188.0	†201.1	214.0	231.3	233.1
PRODUCTION					
Steel Ingot Operations (% of capacity).....	74.5	69.9	90.7	96.4	96.7
Production of Automobiles and Trucks.....	14,880	11,505	16,105	21,015	19,855
Engineering Const. Awards (Eng. News-Rec. 4-week daily av. in thousands)....	\$7,990	†\$7,768	\$7,434	\$4,762	\$7,476
Electric Power Output (million kilowatt-hours).....	4,116	3,939	4,435	4,474	4,418
Crude Oil (daily average, 1,000 bbls.).....	4,892	4,934	4,930	4,778	4,667
Bituminous Coal (daily average, 1,000 tons).....	1,504	1,923	1,917	1,931	1,989
TRADE					
Miscellaneous and L.C.L. Carloadings (daily average, 1,000 cars).....	**76	82	83	82	84
All Other Carloadings (daily average, 1,000 cars).....	**54	64	64	48	64
Money in Circulation (Wednesday series, millions).....	\$27,506	\$27,351	\$26,926	\$25,652	\$23,047
Department Store Sales (change from same week of preceding year).....	-17%	†+19%	+14%	+24%	+2%
Business Failures (Dun & Bradstreet, number).....	16	5	22	14	22
PRICES (Average for the week)					
Spot Commodity Index (Moody's, Dec. 31, 1931=100).....	254.2	253.9	254.7	255.1	250.7
Industrial Raw Materials (U. S. Bureau of Labor Statistics, Aug., 1939=100)...	168.0	167.8	166.5	166.4	165.3
Domestic Farm Products (U. S. Bureau of Labor Statistics, Aug., 1939=100)...	224.6	224.6	226.7	225.7	223.7
‡Finished Steel Composite (Steel, ton).....	\$58.27	\$58.27	\$58.27	\$57.55	\$56.73
‡Scrap Steel Composite (Iron Age, ton).....	\$19.17	\$19.17	\$19.17	\$19.17	\$19.17
‡Copper (electrolytic, Connecticut Valley, lb.).....	12.000¢	12.000¢	12.000¢	12.000¢	12.000¢
‡Wheat (Kansas City, bu.).....	\$1.59	\$1.59	\$1.59	\$1.67	\$1.51
‡Sugar (raw, delivered New York, lb.).....	3.75¢	3.75¢	3.75¢	3.75¢	3.74¢
‡Cotton (middling, ten designated markets, lb.).....	22.28¢	22.24¢	22.53¢	21.70¢	21.58¢
‡Wool Tops (New York, lb.).....	\$1.330	\$1.330	\$1.330	\$1.330	\$1.330
‡Rubber (ribbed smoked sheets, New York, lb.).....	22.50¢	22.50¢	22.50¢	22.50¢	22.50¢
FINANCE					
90 Stocks, Price Index (Standard & Poor's Corp.).....	120.3	115.4	115.6	112.6	101.9
Medium Grade Corporate Bond Yield (30 Baa issues, Moody's).....	3.27%	3.28%	3.27%	3.39%	3.55%
High Grade Corporate Bond Yield (30 Aaa issues, Moody's).....	2.62%	2.61%	2.61%	2.64%	2.71%
Call Loans Renewal Rate, N. Y. Stock Exchange (daily average).....	1.00%	1.00%	1.00%	1.00%	1.00%
Prime Commercial Paper, 4-to-6 months, N. Y. City (prevailing rate).....	¾%	¾%	¾%	¾%	¾%
BANKING (Millions of dollars)					
Demand Deposits Adjusted, reporting member banks.....	37,587	37,444	37,440	36,637	34,400
Total Loans and Investments, reporting member banks.....	62,680	63,094	63,853	58,753	55,906
Commercial and Agricultural Loans, reporting member banks.....	5,948	5,949	5,903	6,313	6,006
Securities Loans, reporting member banks.....	4,326	4,428	4,811	2,977	2,659
U. S. Gov't and Gov't Guaranteed Obligations Held, reporting member banks..	46,455	46,770	47,312	44,105	41,875
Other Securities Held, reporting member banks.....	3,337	3,318	3,201	2,955	2,945
Excess Reserves, all member banks (Wednesday series).....	1,050	1,200	1,150	851	822
Total Federal Reserve Credit Outstanding (Wednesday series).....	23,142	22,782	22,129	20,003	15,999

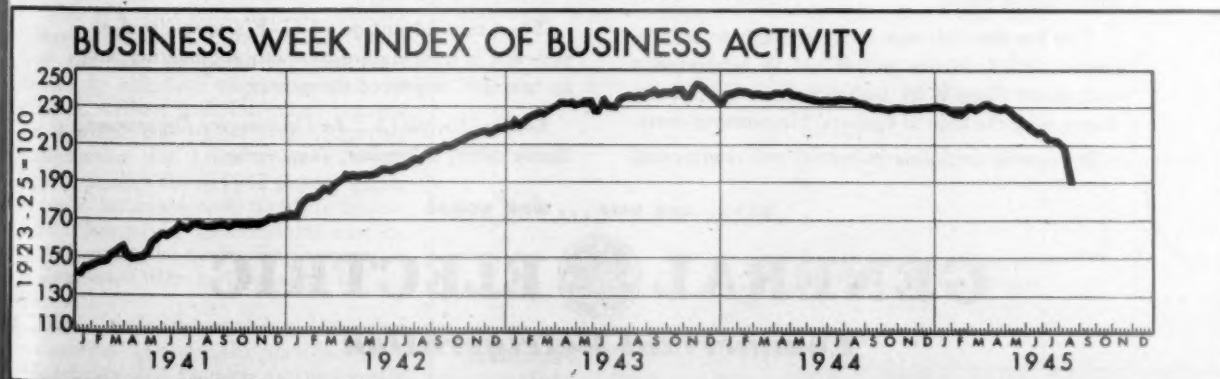
* Preliminary, week ended August 25th.

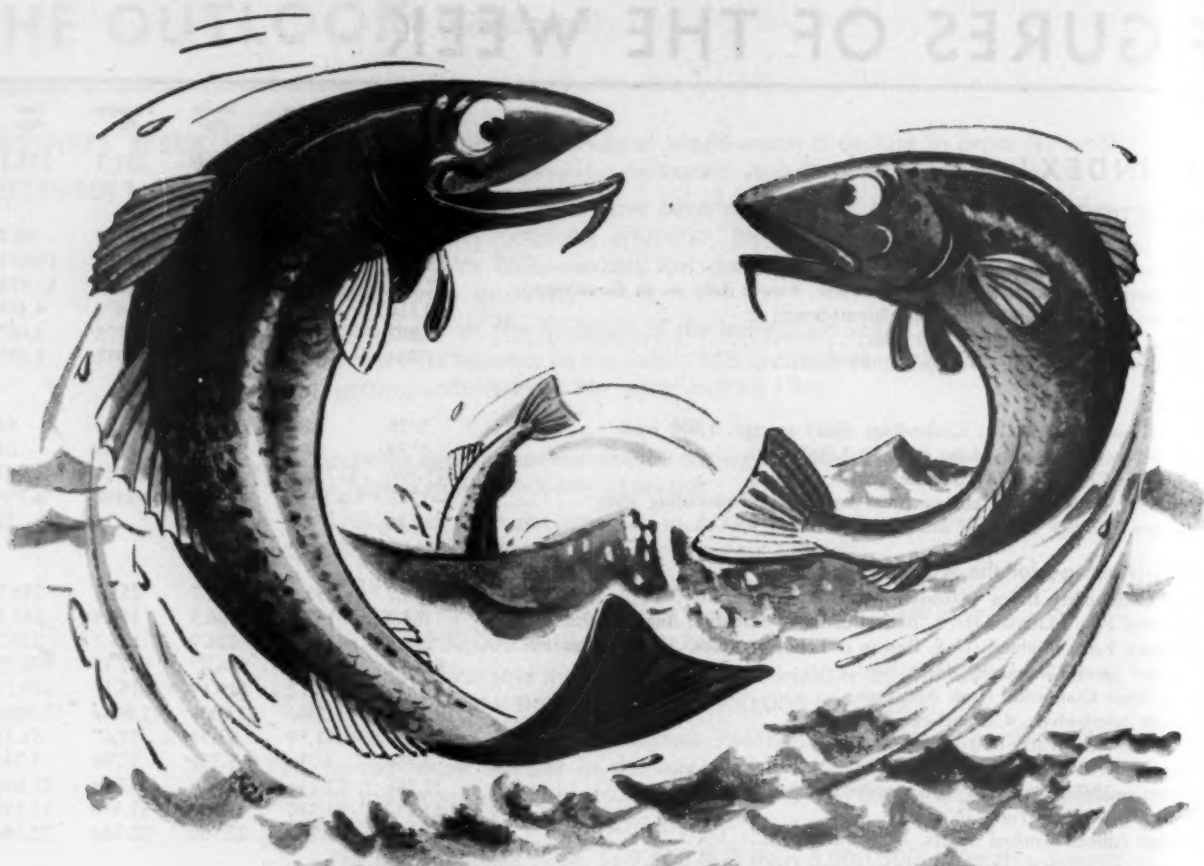
† Revised.

‡ Ceiling fixed by government.

** Preliminary, week ended August 18th.

§ Date for "Latest Week" on each series on request.





FISH STORY

ONCE upon a time a big, healthy fish—stuffed to the gills with vitamins and iodine salts—swam right into a fisherman's net.

Days passed. And weeks. Months. And then one fine day that fish appeared on the dinner table at a home far, far inland from the fisherman's wharf. The surprising thing about this story is that the fish on the dinner table still was stuffed to the gills with vitamins and healthful salts, still had that fine, fresh-caught flavor!

You see that fish was lucky enough to be processed, quick frozen and stored in refrigeration equipment planned by technicians in the fish industry with the help of General Electric engineers.

It's one of countless industrial and commercial

applications of refrigeration and air conditioning which are helping—or can help—to improve products or services, to lower production costs, to reduce absenteeism. In your plant, will control of temperature or moisture content improve the product or speed processing? Do you have places where you need local or spot cooling? Or will temperature and humidity control of storage space provide economies in handling or working of raw and finished materials?

Then take advantage of G-E's specialized experience in temperature-humidity engineering, and its new and improved equipment.

*General Electric Co., Air Conditioning Department,
Section 5869, Bloomfield, New Jersey.*

BUY...and hold...WAR BONDS

GENERAL ELECTRIC

Commercial Refrigeration

Tune in: The "G-E HOUSE PARTY," every afternoon, Monday through Friday, 4 p. m., E W T, C B S... The "G-E ALL-GIRL ORCHESTRA," Sundays, 10 p. m., E W T, C B S... "THE WORLD TODAY" News, Monday through Friday, 6:45 p. m., E W T, C B S

Auto Price Formula Is Set

Action virtually completes OPA's reconversion framework, but consumer still doesn't know how much his new car will cost. Nation's retailers press fight against cost-absorption policy.

OPA's long-awaited formula for pricing autos, announced this week, practically completed the framework of the reconversion price program.

Consumers, however, are still in the dark as to just how much their favorite car would cost. OPA presented a plan designed to nail down prices of individual models to about their 1942 levels. However, each manufacturer will tailor the formula to his own experience. If that experience calls for an increase in the 1942 factory price, the manufacturer will get it. As Price Administrator Chester Bowles put it, "The facts will tell the story."

• **Deep in Fact-Gathering**—At midweek, Detroit companies were deep in fact-gathering and it was still a guess as to when the first of them would be ready to lay their cost facts on the OPA price table. But car-hungry consumers had the reconversion formula to dream with. Briefly, it involves three steps:

(1) The manufacturer starts with his January, 1941, base cost per car.

(2) To this he adds the per-unit increase in basic wage rates and materials since that time: The sum equals his "1941 adjusted cost."

(3) To the "adjusted cost" he adds either his own margin of profit in 1936-39, or one-half the industry average for that period, whichever is higher.

• **Result: New Ceiling**—The result is his new factory ceiling price (box, page 16). There is one exception: If the new ceiling is lower than the 1942 price, the 1942 price stands.

The new-auto price formula couldn't please everybody. Some critics don't like the idea of permitting manufacturers to calculate their own cost increases. Others look for delays because no deadline was set for presenting cost information for OPA approval. Still others predict above-1942 factory prices because increased costs incident to possible changes in specifications can be tacked on to the new ceiling price.

• **Reasons**—OPA had reasons for its action.

There are widely varying degrees of integration among auto manufacturers; Studebaker and Hudson are not nearly so self-sufficient as Ford and General Motors. Shooting for a price formula

on the basis of industry-wide, rather than individual, averages might very well put smaller companies at a disadvantage.

Not all manufacturers are ready to start assembly lines at the same time. The Ford is in quantity production, but most other models are only in pilot-plant production, and some are not even at that stage. A pricing requirement based on industry-wide averages would postpone determination of new ceilings, thus handicapping the companies that are ready to go now.

• **Relying on Competition**—The urge to get cars off drawing boards, on assembly lines, and into dealers' showrooms presumably eliminates the need for a time limit on filing new costs. As for changes in specifications that might bring above-1942 factory prices, competition is relied on to take care of that, too. It is not unlikely that some models may be changed so as to show a net decrease from 1942 costs. When 1942 models came out, manufacturers upped prices between 10% and 19%; hence some of them have elbow room for this kind of trading.

• **For Small Newcomers**—A few days before OPA handed out the auto-price yardstick, small-volume newcomers to

What to Expect From Atomic Energy

When the awful detonation of the Hiroshima bomb was heard around the world, Business Week set forth the details and the implications of the amazing discoveries in atomic physics which had just edged us all into the atomic age (BW—Aug. 11 '45, pp 15-18; Aug. 18, pp 21-24).

Now Business Week is glad to be able to present a definitive report on the atom as a new source of energy, prepared by editors of the McGraw-Hill group of business and engineering magazines.

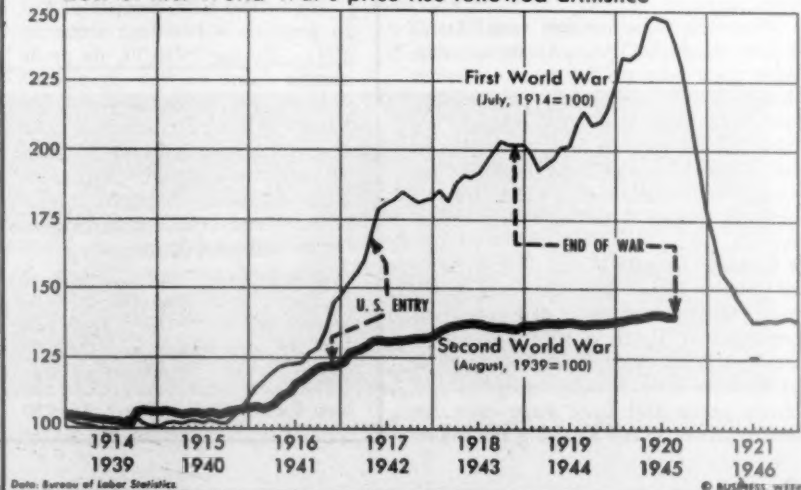
For a nontechnical explanation of atom-smashing by technical specialists, an authoritative appraisal of what atomic power means—and doesn't yet mean—turn to page 57.

the consumer-goods field (manufacturers who don't expect more than \$100,000 in net sales over the succeeding six months) were given a plan for fast pricing. They can either accept prices in line with the comparable product of an established producer, or set ceilings based on current costs plus the full average peacetime profit margin (1936-39) of the industry they are entering.

Both methods will undoubtedly result in some ceilings above those of competitors. But only small amounts

INFLATION DANGER STILL THREATENS

20% of first World War's price rise followed armistice





STILL FOR FREE FRANCE

In his talks with President Truman and in his stumping tour around the country, Gen. Charles de Gaulle has been presenting the case for France—its dire economic need and its dependence on the United States for help in recreating a stable, stabilizing power in western Europe.

of goods will be involved, and competition should soon force the biggest advances into line.

• **Easing the Squeezes**—Coincident with the plan for new small producers, OPA acted to ease price squeezes on many manufacturers who have been producing their regular lines (iron and steel, chemicals, machinery, some consumer goods) throughout the war. If such a manufacturer shows an over-all loss in his regular operations at a still-undefined "normal" volume, he will be allowed to raise his prices to the break-even point.

However, these are only variations in a pattern which OPA, with its industry-wide price program for most consumer durable goods, has already woven about the 1942 price level (BW—May 1945, p19). That pattern was strengthened last Saturday, when the Office of Economic Stabilization gave OPA a green light to extend it to the entire reconversion field.

• **Increase Factor**—Under this pattern, all reconverting industries are given prices determined by tacking an "increase factor" to their 1941 price. This factor is determined by adding to 1941 production cost the increases in materials prices and basic wage rates for factory workers, and applying the indus-

try's average profit margin in 1936-39.

Suppose—and this is purely a supposition—it cost the domestic mechanical refrigerator industry an average of \$50 to produce its product in 1941, and the average selling price was \$60. Since then, materials and labor have gone up 25%. If the industry had a 1936-39 profit margin of 6%, the "increase factor" would be calculated as follows:

1941 Production Cost.....	\$50.00
Increase in Materials and Labor..	12.50
1941 Adjusted Cost.....	\$62.50
Add 6% Profit Margin.....	3.75
Ceiling Price.....	\$66.25

• **Not Inflexible**—In this case the "increase factor" works out to around 10%, which means that any firm in the domestic mechanical refrigerator industry could increase its 1941 price by this percentage. The formula is not inflexible. A particular reconverting firm may apply for individual adjustments under three circumstances:

(1) It requires more liberal treatment than the industry-wide price increase factor allows.

(2) It is returning to civilian production before its industry requests, or receives, a price increase factor.

(3) It has no prospect of receiving an industry-wide price factor because its industry as a whole never converted to war work.

• **A Choice**—Firms expecting gross annual sales of less than \$50,000 are allowed to start with total current production costs, rather than a 1941 base. They then have a choice of adding (1) their own profit margin for 1939, 1940, or 1941, for whichever they have figures, of (2) one-half the industry's average annual profit for 1936-39.

Firms expecting gross annual sales above \$50,000 are permitted either

Auto-Price Example

It cost the XYZ company \$560 to produce a two-door sedan in 1941. During 1936-39, its profit margin came to 4% as against 6%, say, for the industry at large. Since 1941, XYZ company's basic wage rates have gone up \$35 per car and its materials costs \$25. Here is what happens under OPA's reconversion price formula for the automobile industry:

1941 Base Cost.....	\$560.00
Increase in Basic Wage Rates..	35.00
Increase in Materials Cost....	25.00
1941 Adjusted Cost.....	\$620.00
Add 4% Profit to Adjusted Cost	24.80
New Factory Ceiling Price..	\$644.80

their own 1936-39 profit margin, or one-half the industry's during that period, on top of the adjusted 1941 base.

• **How It Worked Out**—The first consumer durables priced by OPA under its industry-wide formula allowed increases of 3% in cast aluminum ware, 10% in sheet aluminum, 5.2% in household washers and ironers, and 18% in radio cabinets. The formula came in for a blast from the washer-ironer industry, which told price chief Bowles that the formula is "decidedly unacceptable and incorrect and will incur such losses as to delay or prevent reconversion by this industry."

But this blast was only a breeze in comparison with the feeling over another key point in OPA's reconversion program—cost absorption by dealers.

• **Distributors' Margins**—During the war, OPA was able to hold retail prices in check by having distributors soak up increased costs; although this reduced margins, volume was so great that distributors' dollar earnings were generally able to equal or exceed their prewar earnings. Bowles, with a recent executive order to fall back on (BW—Aug. 25'45, p15), is carrying cost-absorption into the reconversion period.

OPA maintains that dealers' margins on sales reached all-time highs in 1942, exceeding 1939 by more than 10%. It also feels that demand for goods in the transition period will be so great that retailers won't need high-powered sales organizations; also they won't have to worry much about credit losses, returns, or markdowns to move merchandise.

• **In Self Defense**—Last Tuesday, retailers moved up their heavy artillery—120 pages of text, statistics, and charts—and began firing in self defense. In substance, that defense takes the following line:

(1) About 85% of the industry's wartime profits came directly from savings in services that necessarily had to be dropped; but retailers are expected—and have already begun—to resume such services.

(2) Increases in reported profits, before taxes, for retail corporations were substantially below wartime increases (1939-43) of all other corporate enterprises—268% versus 329%. (For unincorporated retailers, about half the total number, the increase was only 99%.)

(3) So far this year, OPA has allowed 54 general increases in cost of merchandise and all but three of them had to be paid for out of the retailers' pocket-book.

(4) Over the same period, OPA allowed more than 3,900 special price advances for individual manufacturers, processors, etc., and these must also be paid for by the nation's storekeepers.

Buffalo-Reconversion Contrasts-Dallas

Erie County's problem is aggravated by developed industrial economy and fact that most war help was recruited locally.

The night of Aug. 14 brought to Buffalo, as it did to every city and town in the country, one of the biggest celebrations in its history.

But Aug. 15 brought to Buffalo a severe hangover than almost any other major city suffered. On that day 35,000 workers lost their jobs, and by the end of the week the total had climbed to 50,000—the same number displaced by piecemeal cutbacks extending back to V-E Day.

Distressed Area—So hard was the blow that the War Manpower Commission in Washington promptly listed Buffalo as one of nine areas in the country suffering acute unemployment stress. And so hard was the blow that the state unemployment insurance rolls doubled within a week.

The brutal statistics of the situation with which Buffalo and the whole Niagara frontier must contend in the reconversion period are these: In 1940 there were only 269,762 employed in Erie County while at the peak of war production in the winter of 1943-1944 there were 394,457.

Qualifying Factors—That does not mean that jobs now must be found for 125,000 workers if the county is to enjoy the same standards of industrial health that it knew before the war, for in 1940 more than 60,000 of the county's 800,000 population (essentially the same today) were regularly listed as unemployed. Furthermore, many of the new unemployed actually can't be counted as such—many do not expect to work any more; they're just sitting back home.

Estimates are that if 347,174 jobs can be assured, all who want to con-

(Continued on page 19)

TALE OF TWO CITIES

Here is the story of "After the Cutbacks" in two cities of intermediate size and fairly typical in their contrasts as American centers of war production.

- In the northeastern quarter of the country—east of the Mississippi and north of the Ohio—lie most of the major prewar industrial centers, and in this region most of the large urban areas are heavily industrial. So the average city in the Northeast has both an industrial past and future. The war has meant industrial growth rather than birth, and reconversion bears promise of a prompt expansion over prewar activity.

- Cities in the rest of the country were primarily nonindustrial before the war, primarily centers of distribution. The war brought huge new factories and vast expansion in factory employment; but reconversion is a blank. In a few cases, the new plants will be immediately changed over; in some others, peacetime facilities will eventually be attracted by the wartime experience; in many, the giant new plants will simply remain dismantled. But in almost all these cities, the cutbacks mean a sharp and rapid return to prewar ways, with no certainty of a richer future.

- Thus in Buffalo, most of the factory hands are still at their jobs, and most of the rest who want postwar work are merely marking time until the assembly lines are changed over. But in Dallas, laid-off workers console themselves with the hope that enough new industry will be drawn to the city to reopen their war-made industrial jobs.

Texas distribution center must build new enterprises if workers drawn to war-created industries are to be absorbed.

The morning after the war ended, 17,000 workers at the Dallas plants of North American Aviation, Inc., awoke with one question on their minds: Can I get a job in Dallas?

Overnight, peace had canceled all North American's Dallas contracts for P-51 Mustang fighters, C-82 Flying Boxcars, and AT-6 Texan training planes. At the two huge N.A.A. plants 12 mi. west of Dallas, all production had ceased; only watchmen and a few hundred supervisory employees wandered about wondering what would happen to the 67 acres under roof—a cotton field only a few years ago.

- **To the Threshold**—Transition from a cotton field to one of the nation's largest and most complete aircraft manufacturing operations brought Dallas to the threshold of an industrial era. The question yet to be answered: Can a nonindustrial city like Dallas find peacetime employment for machine skills thousands of workers acquired during the war?

Behind the immediate concern of North American employees for new jobs lay one simple fact—and one that implies a negative answer to the question of the future unless Dallas industry expands rapidly. In 1939 the entire manufacturing industry in Dallas employed only 16,339 wage earners, including white-collar workers as well as the men in overalls. This was considerably less than half of the peak 38,500 payroll at North American's Dallas plants last year. It was less than one-fifth of the entire city's industrial peak—78,000 at the height of war production.

- **What They Do Know**—The displaced N.A.A. workers, many of them still



The Curtiss-Wright plant at Buffalo—a symbol of the reconversion employment problem which confronts that city.



CROSS-BORDER SHOPPING BY BOAT

Homeward bound from a "shopper's special" to Leamington, Ontario, Cleveland housewives check with revenue collectors and pay duty on purchases exceeding \$5 (above). Retail meat sales in Canada to U. S. citizens are banned, but housekeepers find it worth their while to make the cross-lake trip to stock up on shoes, clothing, and soap. Some 1,800 board the S. S. Alabama for each thrice-a-week excursion. And Leamington merchants have hired extra help to take care of the customers from over the border.

Dallas

(Continued from page 17)

awed by the vastness of the aircraft industry in its newness to Texas, may find it hard to comprehend that Dallas gave employment to so few industrial workers in peacetime. But they do know that many of the city's principal peacetime industries, such as food processing, textile manufacturing, and apparel and hosiery making, do not require workers with the heavy industrial skills learned at the aircraft factory. They know also that North American has disclaimed any interest in peacetime operations in Dallas.

Anxious to provide new industries to employ these skilled workers, the Dallas Chamber of Commerce took advertising space in national publications to tell how Texas people—many of whom had never even seen a drill press or lathe—became the most efficient workmen in all North American's plants.

• **A Record Claimed**—N.A.A. at Dallas (92% of the workers were Texans) delivered more than 24,000 airplanes—an average production of 462 planes a

month for 52 months. The Texans set what the Dallas C. of C. says is an all-time, all-industry record with delivery of 752 flyaway planes in one month.

Production on the C-82 Flying Boxcar, the plants' fourth complete tooling-up job, had just got under way when the war ended. The Dallas record on B-24 Liberators before they were discontinued cut man-hour costs 30% below the industry average for four-engine bombers in corresponding production brackets.

• **Looking for a Big One**—Playing up the fact that there were no strikes or lockouts at N.A.A.'s Dallas plants (union contracts but open shop operations), the Dallas C. of C. is trying to attract a big industry to the \$35,000,000 plant. Assembly of autos, manufacture of refrigerators or other household equipment, and construction of prefabricated houses are among the uses suggested. Skeptics say that the facilities are much too large for these purposes.

The Office of Defense Plants has announced that it is ready to talk business with any company that wants to buy or lease the N.A.A. facilities. (North

American has a 90-day option, which ODP officials believe the company would waive.) There are two main plant buildings and eleven auxiliary buildings, any one of which would make a fairly sized factory. Total floor space is slightly under 3,000,000 sq. ft., and there are 125 acres of concrete ramps and parking aprons.

• **Another Suggestion**—The chamber has suggested to Smaller War Plants Corp. that the N.A.A. plants would be a logical place to house a group of small companies on an experimental basis. This suggestion didn't evoke much enthusiasm at SWPC, one reason being that the N.A.A. plants have never been declared surplus yet. It is still possible that the War Dept. might keep them on a stand-by basis or for storage purposes.

While the C. of C. suggestion that SWPC may fall flat, it is expected that Dallas will get several new small factories as an outgrowth of N.A.A. training. Already the C. of C. has learned of plans of several individuals and groups of former N.A.A. workers to set up businesses utilizing their newly acquired manufacturing experience. Among the projects are manufacture of cigarette lighters, water heaters, and toys, as well as the operation of a machine shop.

• **More Diversification?**—Chamber officials are especially interested in the fact that several of these manufacturing enterprises are backed by men who had no previous experience in the industrial field. To the chamber, this is a hopeful sign, for it may lead to more diversification of Dallas business.

Before the war, Dallas was known chiefly as the distribution center of rich agricultural and petroleum regions. This distribution activity has grown during the war at the same time that industrial activity has increased sharply. Wholesale business in Dallas totaled \$901,000,000 in 1944, compared with \$475,000,000 in 1939.

• **Branches Reopening**—When the war started, Dallas boasted 2,900 branch offices or warehouses of national concerns. This number was trimmed during the war reduced merchandise for civilians, but in the past few months several companies have reopened their Dallas branches.

Such reopenings have created new jobs in Dallas, and there is still a demand for workers in the service trades. The municipal government is bidding for the N.A.A.

• **USES Places Some**—Many of the displaced workers were finding their own jobs, but the majority headed for the United States Employment Service offices. Eight days after the N.A.A. shutdown, 12,075 workers had registered.

d with USES and 5,878 had been
 rred to jobs. USES received confir-
 mation that 2,700 had been hired.
 Meanwhile, total layoffs in Dallas
 (through Aug. 24) had risen to 18,340.
 Besides North American, the city's
 principal new wartime plants were the
 Firestone Industrial Products Division,
 which manufactured fuel tanks for air-
 craft, and the Lockheed Modification
 plant. Firestone shut down, laying
 off about 900, but Lockheed gave no
 indication of closing. Many of its 1,500
 employees are engaged in experimental
 work on new aircraft models.

Shell Cases to Cotton Gins—Cancel-
 ation of war contracts at several old,
 established Dallas industries affected
 the labor situation only slightly. The
 Gray Co. quickly turned from shell
 cases and other ordnance work to cot-
 ton gins; John E. Mitchell dropped its
 machine work and went back to manu-
 facturing farm implements; Austin
 Co. went from bombs to road
 building; Haggard Pants Co. from Army
 uniforms to civilian clothing.

Southern Aircraft, which had been
 contracting on warcraft parts, turned
 to civilian work; and Luscombe Air-
 craft Corp. shifted its Dallas plant
 to a new all-metal light plane.

The Problem—Although many Dallas
 plants reconverting to peacetime pro-
 duction have announced plans to ex-
 tend their output and add new lines,
 it is considered doubtful that this in-
 dustrial growth will be sufficient to
 absorb all the N.A.A. workers, even
 after allowing for the several thousand
 who will return to their homes in
 areas nearby or otherwise drop out of
 the Dallas labor market. When N.A.A.
 peaked at 38,500 in 1943, it was down
 to 17,500 last year, the surplus workers
 going to other war plants or to nonindustrial
 work. Many women went back to
 housekeeping.

The continuing tight housing situa-
 tion indicates that few of the war
 workers are leaving the city.

Unemployment Continues—The shutdowns
 apparently had little effect on spend-
 ing habits during the first two weeks
 after the war's end. Retail trade in
 Dallas maintained its wartime volume.
 The exclusive Neiman-Marcus, Dallas'
 premier specialty store, war workers
 bargained with debutantes as final pay-
 checks and savings went for hats and
 other accessories. The cutbacks had
 not yet reached the family budget.

War workers who can't find new
 work readily will find comparatively lit-
 tle satisfaction in unemployment com-
 pensation under the Texas law. Maxi-
 mum a worker can receive is \$240, or
 \$12 a week for 16 weeks. Contrasted
 with wartime earnings, this offers Texans
 little encouragement to remain idle.

Buffalo

(Continued from page 17)

tinued working will be able to do so,
 and there will be work for 70,000 serv-
 icemen and women now returning at
 the rate of 1,100 a month.

• **A Big Jump, But**—The 347,174 fig-
 ure is a big jump over 1940, but a
 lot of community planning—and a lot
 of hard cooperative effort—is being
 aimed at its achievement. Four funda-
 mental factors in Buffalo are helping
 out, and speeding recovery:

(1) The Buffalo area isn't dependent
 on its major war industry—aircraft—
 which reached a peak employment of
 125,000, now employs only 10,000 to
 12,000, and may drop to as few as
 5,000 employees. Before the war, the
 area already had a long-established,
 diversified industrial history.

(2) The aircraft industry boomed
 without inflating either population or
 labor force; there is little or no prob-
 lem of providing jobs for in-migrants
 who have no desire to return to their
 homes.

(3) Labor-management relations and
 cooperation have been well above par,
 and labor groups have shown an en-
 couraging ability to get along together
 with a minimum of C.I.O.-A.F.L. or
 interunion friction.

(4) A number of major business and
 industrial establishments have been
 champing at the bit to get big expan-
 sion projects, halted by the war, under
 way now that restrictions are being
 lifted. And several new industries want
 to come in.

• **Some Need Men**—The importance of
 the first of these factors is readily ap-
 parent. Mass cutbacks in Buffalo have
 hit particularly its new aircraft indus-
 try. Many other industries—such as
 magnetic metals mining, pottery, paper,
 lumber and woodworking, steel and

iron, chemical, and radio and electri-
 cal products—either have been touched
 only lightly or are actually in need
 of workers.

In addition, Buffalo is a railroad cen-
 ter, can place several hundred more
 rail workers. Construction has been
 at a standstill since 1943, and A.F.L.
 building trades leaders see an immedi-
 ate need for up to 2,000 men (mostly
 former union members, for after 1943
 practically all workers under 45 years
 old in the building trades entered war
 plants) to fill employment rolls shrunk
 to 1,625 in the county in 1943-44.

• **What Is Involved**—The shiftover
 from war plants to these peacetime
 jobs will not be overnight, nor will it
 take care of nearly all of those who held
 war jobs. Estimates are that 30,000 to
 40,000 who took part in Buffalo's war
 production must shift from industrial
 jobs—or leave the work force.

But, as a matter of fact, most of those
 who have been cut back actually came
 from outside industry. Many were
 housewives and retired workers, who
 don't expect postwar employment.
 Others came from stores, insurance and
 sales offices, general business and service
 establishments in Buffalo. Many actu-
 ally have gone back already; many will
 go back as filling stations reopen, laun-
 dry and milk routes expand again,
 products become available for sales-
 men, and stores—now in late summer
 doldrums—bring personnel to fall and
 winter high employment levels.

• **A Blessing Now**—The fact that work-
 ers from Erie County were primarily
 used in filling its booming war plants
 was a handicap during the war, when
 business and service trades were criti-
 cally short of manpower; now it's a bless-
 ing, for provisions need not be made
 for an overexpanded work force.

The immediate edge is being taken
 from unemployment by state unemploy-
 ment insurance payments. An estimated



Tackling reconversion problems, a Civic Full Employment Committee for the Buffalo-Niagara area held its second shirtsleeve meeting eight hours before President Truman announced United States victory in the Pacific war.



Although 50,000 persons in Buffalo's war plants were made jobless almost overnight, ad appeals for workers continued to appear. These samples are from a single day's issue of the Buffalo Courier-Express.

85% of jobless workers are eligible for the full \$21 weekly checks (the amount paid varies in relation to time worked, and earnings), and fully two-thirds of the laid-off workers are losing no time in taking first steps toward claiming that weekly sum.

• **Active List Swells**—On Aug. 14—the day on which President Truman announced officially that Japan was ready to quit the war—Buffalo's unemployment insurance office had 12,500 active cases (those in which checks were actually being paid out) in its files, and another 12,500 inactive cases (in which, for one technicality or another, no payments were then being made).

One week later harried office staffs hazarded an estimate that 38,000 persons had come to the unemployment insurance office, and 12,500 of these already had been classified on the active list to double it in one week.

• **What USES Found**—Displaced workers seeking unemployment insurance are sent to the United States Employment Service, which tries to place them in jobs. After rechecking requests for workers to weed out those canceled by cutbacks, USES found on Aug. 16 that it had available 2,400 jobs in heavy industry (for unskilled male labor) and 2,100 jobs in what formerly was classified as "nonessential" industry. In accordance with state unemployment insurance rules, applicants report to these employers for interviews, and then exercise their right to turn down proffered jobs as unsuitable.

The reason is clear: Most of the

4,500 jobs had gone begging for months since they call for hard work and low (55¢ to 75¢-an-hour) pay. With only 40 hours work a week now probable, weekly gross pay offered ranged from \$22 to \$30—from which income tax payments, transportation and lunch costs, and—for women—such items as expendable work hose must be deducted. By working, little more—and in instances even less—can be made in actual take-home than the tax-clear \$21 a week which can be had by the simple expedient of a weekly call at the unemployment insurance office.

• **Employers Advertise**—This fact is acting against employment in the low-pay brackets. Hence, with 50,000 persons nominally jobless and wanting work, plants are advertising for unskilled workers, stores for clerks, restaurants for waiters and waitresses, hotels for chambermaids, and laundries and service establishments for general help.

The lure of the unemployment insurance—which is regarded not as a dole or gratuity, but as something earned, an increment to frozen war wages—also is providing a very big question mark to those trying to estimate the number of unemployed who really want jobs. Housewives now freed from war jobs, for instance, will not forego their \$21 weekly benefit even though they do not intend to work after their six-month free ride is over.

• **Eye-to-Eye With Workers**—In Michigan (BW—Aug. 18'45, p104) and elsewhere, efforts are being made to weed

out all who are not sincere in seeking work, and who are not willing to accept work which pays less than that made in war-boomed jobs. In the Buffalo area, however, officials apparently see eye-to-eye with the workers on that issue.

The same cooperative attitude found in general labor-management government relations. When the Curtiss-Wright plants laid off more than 20,000 persons, representatives of the United Office & Professional Workers (C.I.O.) and International Association of Machinists (A.F.L.), two major unions affected, not only held joint meetings, the problems raised, but also were able to sit down with Curtiss-Wright officials to seek out—unsuccessfully—and means layoffs could be averted, stalled for a 30-day adjustment period for workers.

• **And All Pitched In**—The give-and-take attitude was even more clearly shown when the Chamber of Commerce, and later Buffalo Mayor Joseph J. Kelly, named a tripartite Civilian Employment Committee to attend to the problems of jobs for displaced workers. Industry, public, and labor representatives (both C.I.O. and A.F.L.) pitched into the job earnestly and vigorously.

What the committee has accomplished is a matter of debate. It probably has been over-glowing in picturing immediate job prospects (predicting that unemployment will be seen in months). On the other hand, it has set into motion municipal job-creating projects (viaduct reconstruction, street and sidewalk repairs, initially jobs for 100 semiskilled and unskilled workers).

• **Valuable Time**—One thing, however, is obvious: The committee by its cooperative activities is buying valuable time for reconversion planners, holding back possible labor friction while industry and business figure out just how many they can do.

The full employment committee is working on the job of getting plants and business expansion programs underway, and cutting red-tape to get new industries to enter Erie County. For four years Sears-Roebuck has been attempting to get clearance from the government on a million-dollar store and in Buffalo; the committee in one way made a chink in the government's straining wall, hopes soon to have it tumbling.

• **Who Gets the Plants?**—It also is endeavoring to speed decisions on what will be done with the 18 government-owned war plants in the Buffalo area. Curtiss-Wright, Bell Aircraft, and General Motors' Chevrolet Division probably will take three that they occupy. International Harvester and Westinghouse

Electric, not now in the area, are
interested in getting plants.
Mainly, however, the committee is a
gap enterprise. While it may di-
tly bring about some re-employment,
expectation is that industry itself will
must—do the yeoman's job of stop-
the employment toboggan, turn-
it uphill.

How Unions Are Affected?—From la-
standpoint, A.F.L.—with the excep-
of its machinists at Curtiss-Wright
has been hit only lightly, will suffer
long-time losses of material propor-
C.I.O.'s United Auto Workers
will be decimated, but its Steelworkers,
Electrical Workers, Rubber Workers,
and several smaller unions will not suffer
greatly, eventually may even show gains
civilian production swells. C.I.O.'s
Office Workers, young and aggressive,
will be cut to shreds, but this union al-
ready is looking into new organizing
fields in Erie County to recoup.

By work groups, skilled workers are
expected to be jobless for short times
only. They already are being snapped
in competitive fields by reconvert-
ing plants.

Unskilled workers probably will be
jobless for a similar short time (to make
room for many of them, New York Cen-
tral Railroad is sending 6,000 Mexican
workers back home), but the semiskilled
(light assembly work their specialty)
won't be assimilated in a matter of
weeks.

Repercussions—Meanwhile, cutbacks
made themselves felt in banks (75%
more war bond cash-ins were reported
at the largest bank in Buffalo last week,
10% was average) and, strangely, in the
state workmen's compensation office,
where reports of injuries—many of them
months old—doubled in the week after
plant cutbacks. Workers said they
didn't had time to report before.

Operators of private employment
agencies, mostly for service and trades
staffs and domestic help, were hopeful
for an end of five years in which their
benches for prospective workers gath-
ered dust. Backlogs of job offers, paying
up to \$40 a week, were culled for lures,
but work-seekers were practically non-
existent.

Biding Their Time—Why? With
10,000 laid off, with some workers half-
heartedly toying with the slogan, "To-
day we stand in line for unemployment
insurance—tomorrow it may be a bread-
line," workers were by no means willing
to clutch at straws, to worry about a fu-
ture—six months away—when jobless
benefits would end.

Predictions of industrial hirings by
then are, to them, ample excuse for
resting on state funds after, in many
phases, seven-day and sometimes 70-hour,
work-weeks.

New Peaks for Construction

FWA expects building to hit \$6,500,000,000 mark in 1946,
with private activity returning to normal. After that, steady rise
to all-time high of some \$15,000,000,000 by 1950 is predicted.

Construction—the industry of many
industries—has been virtually released
from its wartime assignment and next
year will be building a solid foundation
for peacetime business.

The Federal Works Agency expects
the building of homes, stores, factories,
farms, office buildings, schools, hos-
pitals, highways, churches, public utili-
ties, etc., to run to \$6,500,000,000 in
1946, some 45% higher than this year's
estimate and not far from the total
realized in 1940, the nation's last full
peacetime year (chart, page 22).

• **All-Time Peak in '42**—That estimate
is still far from a new record. Pearl
Harbor shot new construction to an all-
time peak of \$13,500,000,000 in 1942.
But only \$2,800,000,000, or 20%, of
this total was privately financed; the re-
maining \$10,700,000,000 represented
public funds—for war facilities such as
camps, airfields, shipways, aircraft
plants, ordnance factories, military high-
ways, Army and Navy hospitals.

All told, publicly financed building
activity averaged two-thirds of total
new construction during the war years,
a direct reversal of the prewar pattern.

Next year, the customary relationship
probably will be restored; of the \$6,500,-
000,000 total looked for, an estimated
\$4,350,000,000 will be financed pri-
vately while \$2,150,000,000 will rely
on public funds.

• **More Distant Goal**—To that extent,
construction will have fulfilled a major
prerequisite to its own reconversion. An-
other—getting volume up to a planned
goal of more than \$15,000,000,000 an-
nually—will develop gradually over the
next four or five years.

Right now, that \$15,000,000,000-
plus of new construction looks like a
reach for the moon; this year's estimate
of \$4,500,000,000 comes to less than a
third of the hoped-for goal. True
enough, war gave the industry its great-
est year, in 1942, but it was only a year.
With war construction over the hump,
materials and machinery were there-
after channeled into munitions. As a
result, construction declined rapidly and,
in 1944, ran just about even with the
annual average in the three depression
years 1931-33 (\$4,000,000,000).

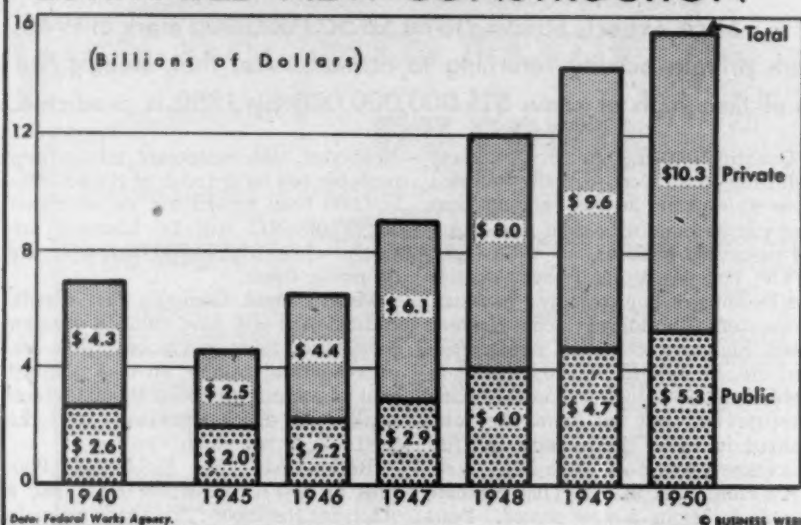
• **Fewer Firms**—As a corollary, construc-
tion organizations were broken up as



AGAIN THE GERMANS MARCH TOWARD RUSSIA

German Army prisoners, some barefoot, some carrying shoes, march down the
long road from Vienna toward Russia, where the Soviet plans to use them to
speed the giant task of rebuilding its homes and industry. Though there has
been no formal settlement concerning manpower reparations, the Soviet, like
the other Allied nations, is turning to practical account-prisoner-of-war labor
that is at hand and that is so desperately needed.

ESTIMATED NEW CONSTRUCTION



skilled personnel went into military service, particularly the Navy's construction battalions (Seabees). Informed estimates place the number of building firms now in business at approximately 140,000, a decline of perhaps one-half or two-thirds from the years immediately preceding the war.

Nevertheless, construction has made a good start on its long uphill climb to a record level of peacetime activity. When Japan surrendered, great quantities of basic materials such as steel and lumber were freed. Vast facilities for the manufacturing of necessary components such as enameled ware, plumbing brass, boilers, refrigerators, household appliances, and hardware also became available.

• **Removing Controls**—In recognition of that fact, the WPB last week eliminated all controls over industrial construction. Restrictions still remain on commercial (stores, offices, theaters, garages) and residential building, but these will be essentially temporary.

For one thing, steel is relatively more plentiful than lumber at the moment, and residential building is construction's biggest consumer of lumber. Besides, neither commercial nor residential building has the reconversion "kick" that industrial construction has at this time. Concentrating on manufacturing facilities now will mean more jobs for later on.

• **Lumber Rule Eased**—Still, the lumber bottleneck is clearing so rapidly that WPB drastically reduced its control over this material last week. From now on, suppliers may sell lumber to anyone so long as there is no interference with the filling of priority orders. Within a short time, perhaps 30 days,

the priority lid on lumber will be off entirely.

In lumber, of course, as in other building materials and components, it will take anywhere from a few weeks to several months to get production going at a smart rate and to stock dealers and warehouses. But the pipeline-filling process isn't going to clamp down on construction. The flow of materials and products will be relatively slow in the earlier stages, but so will building activity. The point is that the materials and components needed at a given time will generally be available.

• **An Industry View**—The industry-wide Producers' Council recently expressed it this way: "Distribution of building products is expected to keep pace with production, with the result that inventories of building materials dealers should be adequate to meet all demands after Jan. 1."

Aside from the comeback of private financing and a sharp increase in overall activity, most government economists regard construction in 1946 principally as the initial marker in an unbroken rise to \$15,500,000,000 in 1950. In keeping with the customary peacetime relationship, approximately two-thirds of this volume (\$10,250,000,000) would come from private funds and one-third (\$5,250,000,000) from public.

• **Method of Calculation**—At the 1950 level, the highest ever known, new construction would account for 11% of the nation's estimated income, the so-called normal ratio. This results from averaging the yearly relationship between new construction and national income during the double decade 1920-39; over those years, the ratio varied from 14.2%

in 1927 to 5.7% in 1933. (As an illustration of wartime dislocations in the industry, WPB and the Commerce Dept. estimate that the ratio dropped as low as 2.4% last year.)

It is also notable that, at the 1950 level, new construction would supply direct employment to perhaps as many as 3,000,000 persons, as against only 800,000 today.

• **Task to Conjure With**—Getting construction up to that unprecedented level—and getting it there in the manner planned—is a task to conjure with.

For example, estimates assume that privately financed construction will lead the way between now and 1950. The publicly financed portion would be concentrated in its logical provinces—highways, flood control projects, hospitals, schools—and would supplement rather than dominate private activity. But if business goes into a tailspin, it wouldn't be long before federal, state and local funds displaced the private leadership.

Again, to move up steadily from an estimated 400,000 new homes in 1946 to more than 1,100,000 in 1950—practically all of them privately financed—presupposes longer-term loans, lower interest rates, changes in building codes, a re-examination of labor practices and industry organization, as well as a revision of the federal, state, and local tax systems.

• **Presupposition**—It also presupposes that technological advances will be daring enough, and sufficiently continuous, to put housing into a better competitive position with other consumer durables.

Congress is another question mark. Billions of dollars have already been authorized for highway construction, rivers and harbors projects, reclamation work, and public housing. Additional billions in authorizations are expected for airports, sanitary facilities, civilian hospitals, rural electrification projects and so on. To date, however, Congress has translated only a small portion of these authorizations into actual appropriations.

Because of such factors, any estimate of future construction necessarily calls for considerable guessing. As with any informed estimate, however, the Federal Works Agency has weighted its guessing with judgment, knowledge, and experience. Here is its preview of major construction categories for the next five years:

• **Residential (Nonfarm)**—Building of new homes next year will more than double this year's activity. Of the expected total of \$1,675,000,000, about 90% will be privately financed. Overall volume will continue to gain, year by year, hitting a top of \$5,350,000,000 in

BURROUGHS MACHINES ARE PREFERRED WHEREVER YOU GO

Because—there is no match for Burroughs machines . . . built with precision to operate with precision . . . designed to provide long and dependable service.

Because—there is no equal to the range of the Burroughs line . . . machines for practically every purpose . . . machines specifically designed for specific jobs . . . machines flexibly designed for versatility of application.

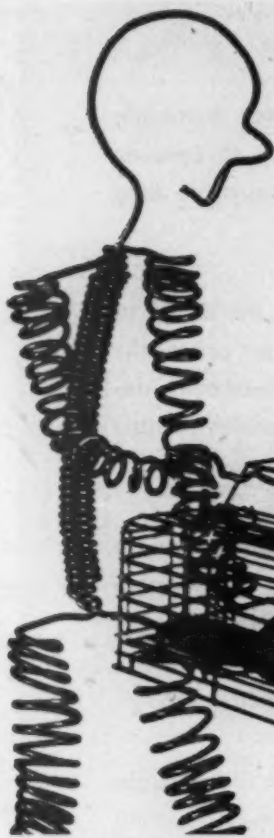
Because—there is no rival to the Burroughs maintenance service . . . prompt, dependable and efficient . . . organized to give Burroughs owners freedom from mechanical interruptions, to insure them the fullest use of their machines.

Because—there is no equivalent to Burroughs counsel . . . technical help by machine accounting men with years of experience in planning efficient applications and installations for all types of businesses.

BURROUGHS ADDING MACHINE COMPANY
DETROIT 32, MICHIGAN

1st
Burroughs
IN MACHINES
IN COUNSEL
IN SERVICE

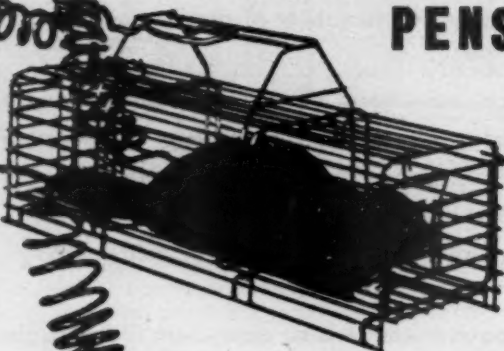




A Cagey Proposition

Busseys*

Bird and Animal PENS



Made of

KEYSTONE Wire

Bussey Rabbit and Guinea Pig Cages are essential equipment for biological laboratories. (Above, Mink Transfer Cage)



The Bussey Pen Products folks are specialists in the manufacture of equipment for raising birds and animals. Literally thousands of Bussey pens are produced annually, in addition to their extensive line of poultry equipment.

As specialists, Bussey's take extreme care in choosing the materials that go into their equipment — reason enough why hundreds of miles of Keystone wire are used annually in Bussey products. We are indeed proud that Keystone wire fulfills this important role.

*Bussey Pen Products Co., Chicago 38, Illinois

KEYSTONE STEEL & WIRE CO.
PEORIA 7, ILLINOIS

Special Analysis Wire
for All Industrial
Uses



Coppered, Tinned,
Annealed,
Galvanized

1950—and 94% of this is expected to be built with private funds. At the level, residential construction would exceed the 1925-26 peak by almost 20%.

• **Industrial**—In contrast to residential building, construction of manufacturing facilities will really be running high, wide, and handsome next year. With the recent lifting of all controls on this type of building, the 1946 estimate runs slightly more than \$1,000,000,000, practically all of it privately financed. That comes to some 10% more than the peacetime peak of 1920. Approximately the 1946 rate is expected to prevail thereafter.

• **Commercial**—Because of continued restrictions in this category, building stores, offices, garages, theaters, restaurants, etc., will total only \$210,000,000 this year, well below normal levels. Controls will not be a factor in 1946 as volume will reach an estimated \$450,000,000. However, this will be far from enough to satisfy the backlog of demand. By 1949, this figure should more than double, coming close to an all-time high at \$1,000,000,000.

• **Other Nonresidential**—This category covers schools, hospitals, churches, institutions, and social and recreation structures. With the notable exception of churches, both public and private funds are involved in each type of construction.

In addition to unfilled demand steadily increasing standard of living will be a driving force in this case. For \$330,000,000 this year, the total expected to jump to \$695,000,000 in 1946, then boom on to unheard-of peaks, climaxed by an expenditure more than \$2,000,000,000 in 1950. This is twice the annual average of the twenties.

Interestingly, public funds will expand private in each year—which is the normal relationship in community facilities. In 1946, for instance, federal, state, and local governments will be accounting for \$65 out of every \$100 spent for type of construction.

• **Farm**—After hitting a wartime low of \$160,000,000 in 1943, farm building has been trending upward and should reach approximately \$330,000,000 next year. Aside from deferred construction this will reflect a generally higher standard of living in rural areas—the result of greater mechanization, better transportation, more home appliances, against a high of \$375,000,000 in 1942. Farm construction is expected to total \$500,000,000 in 1950.

• **Public Utility**—As deferred needs are filled and as new centers of population spring up, construction of pipelines, gas plants, electric light and power projects, railroads, transit lines, telegraph and telephone facilities, and radio

Nevada Counts the Chips

Nevadans are now able to size up the part that gambling plays in their state's economy. Early this year the legislature imposed a 1% tax on the gross revenue of Nevada's 750 gambling establishments. Returns from the first quarter of the law's operation show collections totaling \$39,215.03. This bears out estimates that the tax would yield \$160,000 a year, and gives Nevadans tangible proof that gambling in their state is at least a \$16,000,000-a-year business.

The amount collected under the new law represents about 3% of the entire state revenue and about 18% of the estimated general fund income from state taxes. However, the state gets another \$200,000 out of some \$800,000 collected annually by county sheriffs as license taxes on individual games. The rest of that money goes to counties and municipalities.

Nevada's tax collections from all sources (exclusive of unemployment fund taxes) last year amounted to \$4,536,724.

The new tax became law without the signature of Gov. E. P. Carville (now U. S. senator). Carville favored higher license fees rather than "a type of tax which the state has avoided in the past," indicated a hope that the next legislature would act to repeal the law.

television projects will expand. It will take about three years for this group to duplicate the 1928 top of \$1,500,000,000. After that, new high levels are in sight: \$1,825,000,000 in 1949, almost \$2,000,000,000 in 1950.

• **Military and Naval**—This is the only major type of construction that will be trending downward. From \$515,000,000 this year, volume is expected to drop sharply to about \$125,000,000 in 1946, then may level out at about the prewar average of \$50,000,000 annually. In 1942, the drive to build camps, hospitals, airfields, and other military and naval installations rocketed this category to \$5,000,000,000—more than the total that was estimated for all construction this year.

• **Highway**—Reflecting wartime shortages and controls, road building will be at the relatively low level of \$325,000,000 this year. Recovery will be sharp, however, as illustrated by the estimate of \$750,000,000 for 1946. By 1949 and



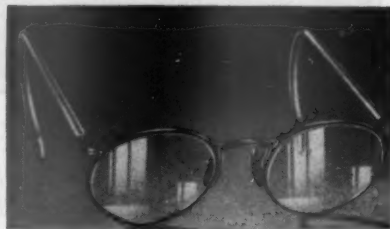
**THAT hit his eye...
and your profits**

Unfortunately, eye accident costs do not always appear in company records. Yet, in almost every plant they are hitting the profit column a substantial blow. For it has been reliably estimated that eye accidents cost approximately \$5 per industrial worker per year.*

*Ninety-eight per cent of eye accidents are preventable**—at a cost of only about \$1.50 per man—when you equip your workers with scientifically designed AO Safety Goggles.

With the necessity for lowering costs becoming increasingly important, why not investigate the genuine opportunity afforded by an adequate eye-protection program? Call in an AO Safety Representative for a complete eye hazard survey of your plant—without obligation.

*Report of the Society for the Prevention of Blindness.



American Optical

COMPANY

SOUTHBRIDGE, MASSACHUSETTS

HERE IS A GROUP INSURANCE PLAN



It gives the employee—

Life Insurance	\$1000.00
If death is accidental	2000.00
Sickness & Accident Insurance—Weekly Benefit	14.00
Daily Hospital Benefit	4.00
Special Hospital Fees	20.00
Surgical Fees (maximum)	150.00

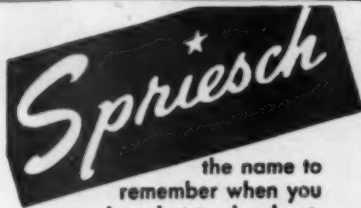
It gives his dependent—

Daily Hospital Benefit	4.00
Special Hospital Fees	20.00

• • •
Aetna will arrange a Group Plan specially for your needs and—more businesses have bought Aetna Group Plans than any other.

AETNA LIFE INSURANCE COMPANY

FOUNDED 1850 HARTFORD, CONNECTICUT



the name to
remember when you
wonder what to do about:

CONTRACT MACHINE WORK
FRONT-END and other assemblies for
automotive, aircraft and farm machinery
industries, vending machines, etc.

**ORIGINATING OR DEVELOPING
NEW METAL PRODUCTS**

**RE-ENGINEERING OLD PRODUCTS,
TOOLS AND DIES**

**ORIGINATING OR DEVELOPING
SPECIAL MACHINES**

Contract Manufacturing
of metal parts or products, stampings,
small steel castings. Contract assembly
work. Eliminating hand work. Stream-
lining production.

• Our informatively illustrated book,
"INGENUITY" will tell executives who ad-
dress me personally, about our facilities.

JOSEPH J. CHENEY
President

INGENUITY

Spriesch EST. 1923
TOOL & MANUFACTURING CO., Inc.
19 HOWARD ST. AD X-44 BUFFALO 6, N. Y.

1950, highway building probably will total \$2,000,000,000 a year, 60% higher than the record volume in 1928 and 1929. An important factor in this expectation is that federal grants-in-aid will make possible considerable improvements in state, city, farm-to-market, and other kinds of local roads.

• **Airport**—With the end of the war, local airport construction, under the guidance of the Civil Aeronautics Administration, will come into its own as a factor in over-all building statistics. The 1946 total is a comparatively modest one, at \$75,000,000, but increases are expected to continue thereafter, resulting in a volume of \$325,000,000 in 1950.

• **Conservation**—The return of peace will see renewed stress on the protection of our natural resources through measures such as flood control, reclama- tion, and soil conservation. Although conservation projects are expected to total only \$110,000,000 this year, they will more than double in 1946. Steady increase from that point is expected to bring activity in this category to \$625,000,000 in 1950.

• **Sewer and Water**—Better living conditions, more new communities, and the trend toward improved sanitary facilities mean more sewer and water projects. The \$225,000,000 outlined for 1946 is about 15% higher than this year's estimate. Subsequent years should see further gains to a level of \$550,000,- 000 in 1950.

Bid for Pullman

Cleveland group's offer to buy operating company may be answer to problem created by federal court's deadline.

Pullman, Inc., parent company of the Pullman group, got prompt action this week on its most pressing problem, whether or not this speed was caused by the move of its subsidiary, the Pullman Co., to cancel as of next Dec. 31 all operating contracts with the railroads that it serves (BW—Aug. 25 '45, p. 38).

• **Gets Action**—Apparent purpose of this action by the 80-year-old operating subsidiary was to force the hesitant U. S. railroads to make up their minds whether to accept any offers by Pullman, Inc., to sell: physical equipment or stock. Price of either was set at about \$73,000,000. Sale by next Mar. 22 is necessitated by a court order, outcome of an antitrust verdict.

First open offer for the Pullman Co. was for the more than 99% of its stock owned by Pullman, Inc. The bid was made by a syndicate headed by Otis & Co., Cleveland investment bankers, and including Robert R. Young, board chairman, and Allan P. Kirby, president, of Alleghany Corp. They made their offer to the U. S. District Court at Philadelphia which ordered the sale, and



AIR CONDITIONING TROLLEY RIDERS

With an eye to holding passengers gained when gasoline shortages turned erst- while automobilists to other modes of travel, Georgia Power Co. has installed in Atlanta what it calls the world's first air-conditioned trackless trolley (BW— Aug. 18 '45, p. 73). It's a standard vehicle with the addition on top of a Carrier air conditioner—the same as used in Pullman cars. Whether, now that private automobiles are running, the company will find it worth while to install the equipment on other trolleys will depend on the reaction of the public.



Post-war radio "handie-talkies" and "walkie-talkies" will enable you to take your radiophone anywhere you go!

"I'm telling Helen about this—right now!"

You're a hundred miles from "nowhere" and you just landed the finest trout in the world! You've simply got to tell your wife (and the boys) back home.

So you turn on your "handie-talkie," signal the nearest "receiving station," get put through long distance and r-r-r-ing!—she's on the other end!

Fantastic? Not at all! For after the war such instruments can be made—about the size of a camera—weighing as little as three pounds—with a range of many miles!

Similar equipment is going to the Allied Armed Forces right now—made possible by

miniature electron tubes developed in RCA Laboratories. These miniature tubes are the size of peanuts and acorns! Actually, with these tubes there can be radios the size of a cigarette case or a lady's compact—with "big radio" reception!

Similar research goes into all RCA products. And when you buy an RCA Victor radio, television set or Victrola, you get one of the finest instruments of its kind that science has achieved.

Radio Corporation of America, RCA Building, Radio City, New York 20. *Listen to the RCA Show, Sundays, 4:30 P.M., E. W. T. over the NBC Network.*



RCA miniature tubes—another example of RCA pioneering in radio and electronics. The "handie-talkie" and smaller radios were made possible through the development of these tubes. Moreover, much valuable space can be saved through their use in larger sets.



RADIO CORPORATION of AMERICA



OFFICIAL U. S. NAVY PHOTO FROM ACME

Command Performance ...where the footlights are flames!

Gone are the early post-Pearl Harbor days when *flash burns* from enemy bombs and shells caused 60 to 65 per cent of the major naval engagement casualties. Today, our fighters protect their skin with "*flash cream*," an easily applied paste which dries in a thin film, yet gives full protection from flashes of extremely high temperature.

When the Naval Medical Research Institute invited West Disinfecting Company of Long Island City, N. Y., to cooperate in developing flash cream, only the purpose and desired physical characteristics were known. Composition, chemical ingredients, and means for production were yet to be determined. One of the problems West solved was how to handle the *tough-to-pump* compound in a sure and continuous flow—by *pumping*.

As it comes from the finishing rolls, flash cream is very heavy, highly viscous, sets-up stiff in just a few minutes—presents a *real pumping problem*. That's why no ordinary pump could fill the bill, and why West selected an R & M Moyno to prevent production delays. From the first the Moyno "*performed perfectly*." No matter how stiff the cream, piping always is kept *free and open*.

THERE'S ONLY ONE MOYNO

No other pump is like the Moyno. It has no pistons or valves, no high internal turbulence, yet it pumps virtually *anything* from free-flowing liquids to non-pourable pastes, handles *abrasives*, passes *particles*, resists *chemical reaction*—stands up where other pumps fail.

Ask us for new Book No. 20, "A Turn for the Better in Positive Pumping Without Pulsation." And ask us, too, for literature on electric motors, industrial ventilation, hoists and cranes, and compact speed-change units for converting machines to direct drive. Robbins & Myers, Inc., Springfield, Ohio. In Canada: Robbins & Myers Co. of Canada, Ltd., Brantford, Ontario.



Flash cream as it comes from the rolls. It sets-up to block piping and makes pumping difficult.



ROBBINS & MYERS, Inc.

FOUNDED 1878

MOTORS · HOISTS · CRANES · MACHINE DRIVES · FANS · MOYNO PUMPS

are willing to pay the price that has been asked from the first public move last summer.

• **Railmen Doubtful**—Nobody could laugh off such a bid by the men who had made good their control over the Van Sweringen rail empire. To many a rail stock specialist, the deal looked like a natural. Rail executives, by nature less adventuresome, were dubious. If the handful of roads that operate the 605 newest, most modern, lightweight Pullman sleepers should exercise their options to buy this equipment, the remainder of less modern, heavier 6,000-odd sleepers might look less appetizing to Otis, Young, and their syndicate. Separate sale of the lightweight units would presumably reduce the total price to the syndicate by roughly \$35,000,000.

Pullman officials cautiously said negotiations would tell the story, hinted that other eager purchasers are waiting.

Films Reconvert

Hollywood was already off war themes when the Pacific war ended. Industry now seeks to recover foreign markets.

When American troops landed on Leyte, Hollywood motion picture studios laid down an edict: No more war themes for the present.

Dividends from this policy are being counted now—fewer war films to be thrown to the mercies of a box office that is predominantly peace-minded.

• **Total Salvage**—None of the war films now awaiting release will be scrapped or shelved. The studios are convinced that they will draw. In fact, Warner Bros. has yet to start shooting "Task Force," the celluloid history of U. S. naval aviation. The studio plans to go ahead with it as soon as the Navy will provide planes, personnel, and flattops in California waters.

Waiting in cans are Metro-Goldwyn-Mayer's "They Were Expendable"; Twentieth Century-Fox's "Walk in the Sun," a drama of the Italian front; RKO Radio's "Back to Batan"; Columbia's "Prison Ship"; and United Artists' "Paris Underground."

• **Time Dictates**—What dictates the cinema capital's cautious approach is that it takes a minimum of six months to produce a high-budget feature (\$1,000,000 and up), even a rushed release.

The emphasis now is on postwar drama dealing with the readjustment of the returning serviceman to civilian life. Four features of this type which will hit the screen first (in six to eight

months) are Sol Lesser's "Civilian Clothes," a remake of a World War I play; RKO Radio's "All Brides Are Beautiful" and "They Dream of Home"; and Twentieth Century-Fox's version of the Maugham novel, "Razor's Edge."

More Film Released—Last week the War Production Board brightened the box-office prospects of these and other peacetime pictures by ending its restrictions on use of raw film. The studios, like most other civilian enterprises, were hit hard by war. Loss of manpower and drastic curtailment of equipment and materials for set constructions (BW—Jul.25'42,p38) drew many a groan from producers. But the film shortage caused the loudest howls.

Picture studios were limited to 1,000,000,000 ft. of 35-mm. film a year. The rest of the output went to the armed services, lend-lease, and our good neighbors (Mexico, for instance, got 10,000,000 ft. a year).

Fewer Prints, Longer Runs—Distributors had to pull in their horns. Where in the past, they had made as many as 350 to 450 prints of a top feature for domestic release, during the war they were restricted to 250 prints.

Nobody is wasting tears on the film colony, however. Although prints were limited, they were held for long runs in the first-run theaters, and the cash return was correspondingly increased. And the wartime demand for escape entertainment provided a ready-made box office for even the most mediocre screen fare.

From A to Z—Actually, when restrictions were placed on raw film in 1942, the major producers overhauled their production schedules; they were determined not to waste the precious film on anything less than "A" caliber. This surfeited the market with pictures carrying the "A" label (based on production cost). But when these features reached the screen, many of them bore unmistakable signs of "B" quality—and even "Z" quality, as the trade classifies the total flops.

The patient movie-going public tolerated the slump in quality mainly because the "Z" picture often wound up as the tail on a double feature, headed by a reissue of some box-office smash of bygone days. For each of the past four years, Paramount, Metro-Goldwyn-Mayer, and Warner Bros. have averaged five or six reissues apiece.

Escape Films Pay Off—On the other hand, the war period brought forth a number of features which surpassed, in audience appeal, the fondest dreams of Hollywood's prognosticators. Among them was "Going My Way" which won almost a monopoly on Academy awards; "Hitler's Children," a \$208,000



ACCO
products help
build roads

ROAD BUILDING calls for plenty of equipment. It must do rugged work efficiently, economically and safely. That's why you'll find so many engineers specify so many ACCO products for construction jobs.

You'll see wire rope made by American Cable and Hazard supplying the muscle for shovels, scoops and other equipment. You'll notice hoists and cranes by Wright handling heavy materials. You'll find chain by the American Chain Division in service for pulling and lifting. You'll see electrodes by Page Steel and Wire in action at welding jobs.

These are only a few of the primary products made by the 15 divisions of ACCO—products vital in war, essential in peace: Chain • Wire Rope • Aircraft Cable • Fence • Welding Wire • Cutting Machines • Castings • Wire • Springs • Bolts & Nuts • Hardness Testers • Hoists & Cranes • Valves.

ACCO

BUY WAR BONDS



AMERICAN CHAIN & CABLE •

BRIDGEPORT
CONNECTICUT

production which grossed almost \$3,000,000; and the "Lassie" and "Flicka" pictures, simple animal-kid dramas which provided escape from the realities of war.

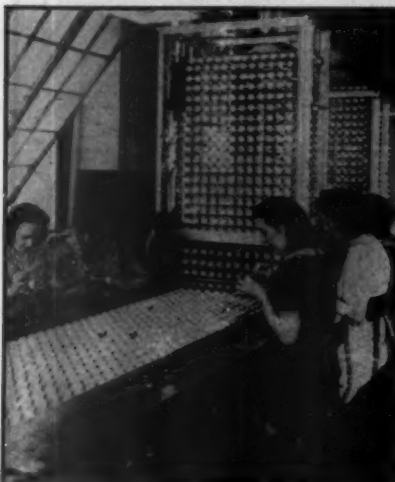
There has been no visible evidence of a slump in movie patronage since the war ended, although the industry wouldn't be surprised if revenues for

the first six months of peace show a slight drop. The film capital is concerned more, at the moment, about recovering its foreign markets than about holding its domestic gains.

• **Easier Exports**—Largely through the meeting of minds achieved when J. Arthur Rank, the British film leader, visited American producers recently

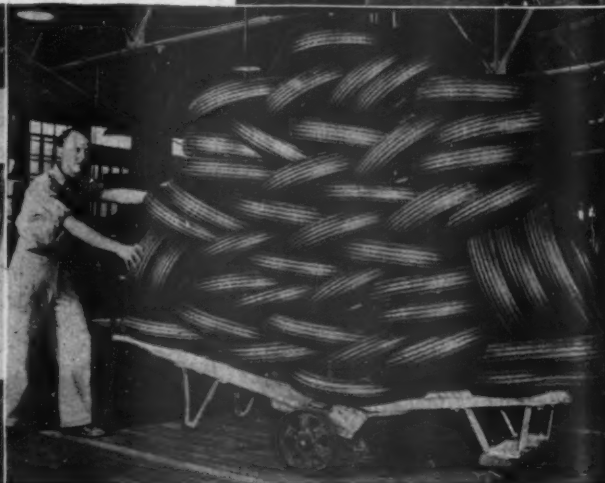
(BW-Jul.21'45,p32). England has relaxed its restrictions on importation of American pictures, but liberated areas in Europe (notably the Netherlands and Belgium) have thrown up import barriers.

Technologically, Hollywood is in surprisingly good shape. Camera, electrical, sound, color, and other equip-



CIVILIAN PRODUCTION BARS GO DOWN

With most of the barricades to civilian production going down, manufacturers—large and small—are rushing into production of long-wished-for items to gladden the heart of both industrialist and consumer. United States Rubber Co. reports that by fall golfers will be able to get some of the new balls (above, left) which hitherto have been reserved for military rehabilitation and recreation camps. A Pittsburgh Toyad Corp. worker (above, right) proves that her company has converted from fins for rockets (in her right hand) to toys, to be ready for Christmas. Coming off one of the assembly lines of the A. C. Gilbert Co. plant, New Haven (right), are electric drills, streamlined and more powerful than prewar ones, for civilian use. At Akron, Ohio, a Goodrich employee (below, right), rolls out the first barrowful of "all-civilian" tires. And (below, left), an employee of Marlin Firearms Co., New Haven, adjusts the triggerguard on the new postwar sporting rifle.



nd has
ortation
ated area
etherlands
up impor

l is in sur
nera, elec
her equip

the Hearst Newspapers about JAPAN

In the 1890's the Hearst Newspapers first pointed out the "Yellow Peril" of Japan to U. S. aims and interests in the Pacific.

In 1898 the Hearst Newspapers urged the annexation of the Hawaiian Islands by the United States as a defense measure against growing Japanese power in the Pacific.

In 1905 the Hearst Newspapers published the startlingly prophetic cartoon reproduced at left, at the signing of the Treaty of Portsmouth which ended the Russo-Japanese War.

In 1912 the Hearst Newspapers focused national attention on Japanese attempts to colonize Lower California.

In 1916 the Hearst Newspapers warned that Japan had imperialistic

designs on the entire continent of Asia and the islands of the Pacific.

In 1919 the Hearst Newspapers fought the League mandate which handed over the Carolines, strategic Pacific islands, to the Japanese.

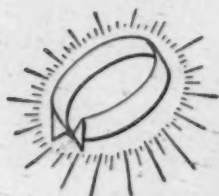
In 1921 the Hearst Newspapers opposed the decision of the Washington Disarmament Conference by which our government sacrificed 32 ships of the line.

In 1933 the Hearst Newspapers warned that Japan was taking over industrial control of the Philippines.

In 1941 the Hearst Newspapers, right up to the time that bombs fell on Pearl Harbor, were still hammering for increased naval appropriations and for strengthened fortifications in the Pacific.



Possibly... the Only Plastic Part in the First Plane



History makes no note of the fact, but the cellulose nitrate collars which the Wright brothers might well have been wearing on that portentous flight Dec. 17, 1903, constituted the only plastic part in that first plane.

And if they were in there, they were no doubt the product of the company... founded in 1888... which became the Plastics Division of Monsanto Chemical Company.

Since that first flight, planes, plastics... Monsanto plastics... have come a long way. Over a thousand plastic parts are now reported on larger naval planes. Monsanto, instead of making only cellulose nitrate, the first plastic materials the world knew, now offers one of the broadest and most versatile groups of plastic materials in the industry.

Among Monsanto's "flying plastics" are the Resinox* resins for laminating wing tabs, fillets, etc., Thalid* for impression molding structural parts, Styramic* HT for vital radio and electronic equipment, Resimene* for non-arcng electrical connectors, Lustron* and Fibeston* for clear, transparent parts, operating equipment, etc. And this is only a beginning.

To keep your business and yourself up to date on Monsanto plastics activities in the great proving ground of the air, ask to have your name placed on Monsanto's plastics mailing list. No obligation, simply address: MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Massachusetts.

*Reg. U. S. Pat. Off.



ment has been kept in good repair. Much of it could be replaced, of course, but the studios are holding immediate replacements to a minimum, for they know that manufacturers have better, more efficient models in process for early release.

Pushing Skyward

Webb & Knapp's building program includes skyscraper in New York and major edifice on Denver's old Courthouse Square.

Two bold, imaginative steps toward the predicted construction boom have been announced by Webb & Knapp, Inc., New York real estate firm. One is an office skyscraper to be built on the present site of the Marguery Hotel and apartment houses on New York's Park Avenue. The other is a building, its use not yet finally determined, which will replace Denver's old Courthouse Square.

• **Ambitious**—Both projects are ambitious, even for Webb & Knapp, whose own real estate holdings are already scattered over 20 states, and whose clients include Vincent Astor, Gimbel Bros., Columbia Broadcasting System, and major New York banks. (The firm's most unorthodox operation to date is managing Monte Carlo, New York night club, after tenants found it unprofitable.)

Webb & Knapp has acquired property for close to a dozen similar new building projects in other U. S. cities. Most of them will be financed by Webb & Knapp, but outsiders will be invited to participate, up to 50%, in some.

• **On Air Rights**—The New York skyscraper will be built in the swank club and residential area just north of Grand Central Terminal, on air rights secured by a 63-year lease from the New York Central Railroad, whose tracks run underneath. A department store will probably occupy the Madison Avenue side of the block-square building, with specialty stores in other ground floor space. Offices will take the upper floors—some in a tower which will rise without setbacks from the sixteenth to thirty-fifth floors.

Innovations include escalators between intercommunicating floors; removable, but sturdy, partitions within offices; interior loading and garage facilities for tenants. Razing the residential buildings now on the site will begin in about a year.

• **Litigation in Denver**—In Denver, Webb & Knapp is dickering with tenants before drawing blueprints, unperturbed by two suits (denied in lower courts) brought against the city by irate

citizens who contend it had no right to sell the park. Tentative plans call for a hotel on one side of the property, a department store on the other, with a building for indoor parking sandwiched between them.

Walls bordering the street will be scalloped to accommodate the 40- to 50-year-old elms that now rim the square. The building will cost about \$3,000,000, and will be financed within the firm, through a mortgage obtained from an insurance company.

• **Highest Bid**—Webb & Knapp's \$818,000 offer for Courthouse Square topped that of Denver bidders.

Mildly surprised at this evidence of eastern interests' faith in their future, Denverites nevertheless have figured out some reasons for it: (1) the town's steady, but not sensational growth; (2) apparent permanence of federal offices now in Denver; (3) future ordnance and other defense activities likely to be located along the base of the Rockies, for safety; (4) prospect of increasing tourist travel; (5) diversion of water from beyond the Continental Divide, which will provide irrigation for new farms, and power and water for urban populations and additional industries.

• **It Seemed "Propitious"**—Since Webb & Knapp spent four months studying Denver before placing the bid, it may have been influenced by some of these factors. But William Zeckendorf, ex-



Left vacant when city and county governments built their present joint building (above, left), Courthouse Square has long provided pleasant strolling grounds for Denver office workers. Recently it was purchased by the New York real estate firm, Webb & Knapp, which plans to build a hotel or department store, or both, but promises to save the trees.

POLLAK WELDING PROCESSES

● For the less common metals—highly developed for war production—may improve the quality and usefulness of your afterwar products

Welding of the less common metals, such as Aluminum, Stainless Steel, Monel and Inconel is a highly specialized process. The improvements made in welding techniques at Pollak's before and during the war will soon be available for peacetime production.



Pollak Welding is a phase of the coordinated manufacturing facilities which may help to improve your products and enhance their acceptability. (Illustration shows seam welding.)

ELECTRIC RESISTANCE WELDING...

This process has been highly developed at Pollak. Equipment is ample for large "runs" and our highly skilled operators are proficient in the several specialized varieties of resistance welding used, such as:

**Simple Spot Welding
Projection Welding
Seam Welding
Butt, or Flash Welding**

ELECTRIC ARC WELDING...

In this work, Pollak has evolved a craftsmanship which fits the right type of arc welding to the product in process, supplementing other Pollak manufacturing operations. The various types of arc welding used here are:

**Simple Manual Welding
Manual Welding
Semi-Automatic Welding
Fully Automatic Welding**

TORCH WELDING...

Oxy-acetylene and oxy-hydrogen welding techniques have also undergone many improvements at Pollak's. Particularly is this true of the more difficult alloys. The processes used, similar in form and applicability to arc welding, are:

**Manual Welding
Semi-Automatic Welding
Automatic Welding**

**POLLAK
PRECISION
PRODUCTS**

Inquiries about the Pollak welding facilities as a part of our complete manufacturing processes are welcomed

POLLAK MANUFACTURING COMPANY

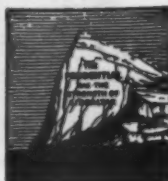
ARLINGTON, NEW JERSEY

Complete product manufacturing facilities which include, besides welding:
Developing • Designing • Machine Work • Spinning • Stamping • Electrical Work

COLLEGE FOR YOUR CHILD ON EASY PAYMENTS

Let a Prudential representative show you how you can use life insurance to build a fund for putting your boy or girl through college, and why you should start it when the child is young.

Telephone or write nearest Prudential office



The PRUDENTIAL
INSURANCE COMPANY OF AMERICA
A mutual life insurance company
HOME OFFICE NEWARK, NEW JERSEY

**2 MEN DO A DAYS WORK
IN 30 MINUTES**

WITH A **Mall CHAIN SAW**
REG. U.S. PAT. OFF.



MALL Gasoline Engine Chain Saw.
Available in many cutting capacities. Also Pneumatic and Electric models.

Make the most of time and labor with a MALL Gasoline Engine Chain Saw. Cut piling, timbers and planks with speed and accuracy—simplify heavy industrial construction. Powerful 2-cycle gasoline engine starts easily—uses very little fuel. Handle throttle and stall proof clutch facilitate operation. 360 degree index permits horizontal, vertical and any angle cuts. Pneumatic models can be used to cut piling under water. Electric chain sharpeners are available.

Write for name of nearest Distributor. Demonstrations can be arranged.

MALL TOOL COMPANY, 7768 South Chicago Ave., Chicago 19, Ill.



Mall
REG. U.S. PAT. OFF.

**PORTABLE
POWER TOOLS**



First major inroad on New York's swank Park Avenue residential section is a skyscraper office building with which Webb & Knapp will replace the Marguery Hotel and apartment buildings (above). The \$35,000,000 project will include a 35-story tower and will be built over New York Central Railroad tracks.

ecutive vice-president, simply said that the firm "acquired the property at a time when location appeared propitious for development and when it could find sound use occupancy."

The same reasoning prompted acquisitions in Beaumont and Houston, Tex.; West Palm Beach, Fla.; Atlanta; Detroit; Washington, D. C.; Flushing, Long Island; and New York.

GUAYULE LOSES BACKER

The War Production Board this week wrote finis to the war-inspired program for expanding guayule processing facilities (BW—Feb. 7 '42, p. 68) as a substitute source for once badly needed natural rubber.

With Far East sources for crude rubber opening up once more, guayule has assumed a secondary role, so WPB withdrew its sponsorship of four new processing mills, two each at Bakersfield and Patterson, Calif.

Firestone Tire & Rubber Co., given the contract by Rubber Reserve Co. to build and operate the four mills, has no interest in completing or using them itself.

Guayule now under cultivation will be harvested and processed at two other mills now operating at Salinas and Bakersfield, Calif., but no further government-sponsored plantings will be made.



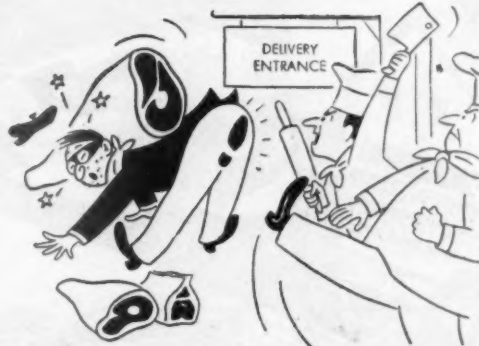
1. "Steak? Yes, sir! Extra pat of butter? Why, of course!" Remember when you could walk into the Hotel Pennsylvania and make your selection from a wide variety of food superbly prepared by experts? Remember those tantalizing menus enhanced by the magic of outstanding chefs?



2. When the war brought rationing problems into your home, it carried the same problems right into our kitchen. For the Hotel Pennsylvania, just like yourself, was point-rationed—based on the number of people served. Yet, in spite of rationing difficulties, our menus remained inviting and nourishing.



3. Hotel Pennsylvania Research Kitchens hummed with activity. New dishes were devised to meet rationing conditions. When certain foods became scarce, we substituted others equally nutritious and inviting. And, as our kitchen staff shrank due to the war, our old-timers carried on manfully.



4. At times, due to food shortages, it looked as though our menus would be meager. But, even in emergencies, Hotel Pennsylvania food buyers have *always* purchased on the open market. *Never* would we tolerate dealings with the black market. Every bite of food we serve you is Government-inspected.



5. Our chefs and cooks await the day when they can once again give you the food thrill of your life! Imagine thick steaks and chops . . . mountains of butter . . . delectable dishes, prepared to your own taste! Until then, our chefs will do their utmost to bring you fine food—excellently prepared.



YOUR DOLLARS ARE URGENTLY
NEEDED FOR U. S. WAR BONDS

York's
ial sec-
building
will re-
l apart-
\$5,000-
5-story
r New

id that
y at a
pitious
id find

acqui-
s, Tex.;
a; De-
ushing,

s week
rogram
facili-
stitute
natural

le rub-
le has
WPB
r new
bakers-

given
e Co.
s, has
them

will be
other
and
gov-
ll be

, 1945



Air Express

THROUGH COORDINATED ENGINEERING

Here is an example of how a specially engineered rubber belt conveyor effected important savings in getting out coal quickly. Bridging a valley from mine to preparation plant, this aerial short-cut saves precious hours, increases material output.

In planning this unusual installation, mine engineers, designers of mechanical equipment, and U. S. Rubber engineers worked as a group. The descending, suspended rubber belt conveyor developed by this

three-way team has proved efficient and economical.

U. S. Rubber belting specialists have become experts in their field—gaining the broadest possible experience, by dove-tailing their efforts with those of the customer's engineering staff on countless installations of every type.

If you have a problem which can be solved by the use of engineered rubber products, our engineers will be glad to work with you.

SERVING THROUGH SCIENCE



WITH ENGINEERED RUBBER PRODUCTS

UNITED STATES RUBBER COMPANY

1230 SIXTH AVENUE • ROCKEFELLER CENTER • NEW YORK 20, N. Y.

Willow Run Bid

First solid offer for big plant is made by Kaiser-Frazer, presumably for production of medium-priced automobile.

Henry J. Kaiser was back knocking at the door of the Reconstruction Finance Corp. this week.

Together with his partner Joseph W. Frazer in his new auto-making venture, and with the blessing of the United Automobile Workers (BW—May 26 '45, 16), he was negotiating with RFC for five-year lease on the big Willow Run plant in Detroit.

Ever since the Ford Motor Co. announced last spring that it had no need for the big plant where it made liberator bombers for the government, Detroit has been inclined to write the 100,000,000 project off as one of the casualties of the war.

"Not Expendable"—Comments Frazer acidly: "Certainly Willow Run is not expendable to those companies who do not have as much manufacturing facilities for the production of civilian goods as they need. The Kaiser-Frazer Corp. finds itself in that category."

If Kaiser-Frazer succeeds in making a deal, other auto companies assume that the plant will be used for the manufacture of the medium-priced Frazer car; the low-priced Kaiser car has presumably been scheduled for West Coast production only. No one, however, is booking any bets on these prospects. Willow Run is big enough for large-scale, mass-production operation, and the low-priced car is the one that can account for volume output and volume sales.

As a matter of fact, Detroit isn't seriously worried yet about the entry of the Kaiser-Frazer interests on any basis, despite the fact that their offer on Willow Run is the only solid one made to the RFC thus far.

Kaiser Protests—RFC isn't giving any of the war properties away, as Henry Kaiser himself can testify. This week the West Coast industrialist, who contemplates the creation of a western steel empire by joint operation of RFC's Geneva Steel plant at Provo, Utah, and his own mill at Fontana, Calif. (BW—Jul. 21 '45, p15), was bitterly complaining about the hard deal which RFC offered him to finance the reconstruction of Fontana to peacetime production (BW—Aug. 25 '45, p31).

Kaiser complains that RFC used the western differential on steel prices in its survey to determine the probable earnings of Fontana, and on this basis

HOW A DISSTONEER SOLVED THE PROBLEM OF FILING CASE-HARDENED STEEL



A manufacturer had the problem of removing sharp edges from case-hardened propeller shaft flanges.

The work was being done on a lathe, first with an abrasive wheel then with emery cloth, pieces of which had

to be replaced frequently thus causing considerable delay.

A Disstoneer* suggested the use of the Disston Carbology filing tool. This tool gave a finish as fine as that secured with emery cloth, there was no wasted time, and lathe speed was stepped up from 450' to 900' per minute. After six weeks of use the file showed no noticeable wear.

The Disston Carbology filing tool is designed as a finishing tool for lathe filing of case-hardened steel, brass and bronze. It is single cut on both faces, 34 teeth per inch, and the entire Carbology surface is one continuous piece, thus eliminating objectionable joints. When one side is completely used the insert may be reversed. After the second surface is worn, a new Carbology insert may be installed in the original aluminum holder.

Another clear-cut case of Disston leadership



***DISSTONEER**—a man who combines the experience of Disston leadership and sound engineering knowledge, to find the *right* tool for you—to cut metal, to cut wood and other materials—and **TO CUT YOUR COST OF PRODUCTION**—not only on special work, but on ordinary jobs as well.

Perhaps your cutting problem is different. But whatever it may be there is a Disston tool that will assure utmost efficiency and economy. For instance—

DISSTON NARROW BAND SAWS FOR WOOD



They are made of the same type of steel and with the same care as Disston Wide Band Saws which are standard equipment in leading lumber mills and woodworking plants. The toughness and high flexibility of Disston Narrow Band Saws enable them to withstand the constant bending and straightening encountered on small, high-speed machines. Supplied in many widths and gauges. Write for particulars.

set the terms of the financing deal. He contends that if this differential could be reduced, lowering steel prices as much as \$6 to \$16 a ton, a considerably expanded market could be built. But no price reduction is possible if Fontana's capital debt is maintained at the level that is proposed by RFC, Kaiser argues.

Alcoa Challenged

Reynolds Metals Co. offers to run government-owned plants now operated by Aluminum Co. Would accept lower fees.

Reynolds Metals Co. this week set itself up as a potent challenger to Aluminum Co. of America as the nation's No. 1 aluminum producer by offering to run government-owned, Alcoa-operated producing and fabricating plants at a lower charge than Alcoa currently is receiving for operating them.

• **Stop-Gap Proposal**—Offered as a stop-gap arrangement to keep the government plants going until they can be sold, the Reynolds proposal to the Surplus Property Board provides that it receive from the government direct costs, plus one-half the annual charge now paid Alcoa as indirect overhead, plus one-half the amount allowed Alcoa (15%) as profit.

Reynolds said it is interested in leasing and ultimately acquiring (1) either the alumina plant at Hurricane Creek, Ark. (capacity 1,555,000,000 lb. annually), or the Baton Rouge (La.) plant (capacity 1,000,000,000 lb.); (2) aluminum reduction plants at Troutdale, Ore. (capacity 141,000,000 lb. of ingot a year), Jones Mill, Ark. (capacity 141,000,000 lb.), and Spokane, Wash. (capacity 216,000,000 lb.); and (3) either the Spokane or the McCook (Chicago) aluminum sheet plant (capacity of each is 24,000,000 lb. per month).

• **663,000,000 Lb. Goal**—With its present aluminum reduction capacity of 165,000,000 lb., Reynolds thus would have a total potential output of 663,000,000 lb. of ingot. This compares with Alcoa's capacity of 838,000,000 lb., if all its presently owned potlines continue in operation. The added facilities would also make Reynolds' ingot capacity greater than its sheet and fabricating potential. Thus it would become a seller of ingot, competing with Alcoa, where it formerly has been a buyer.

Favoring Reynolds' offer is the long-standing government antimonopoly policy under which bidders other than Alcoa will receive preference—although this does not definitely disbar Alcoa.



TONGS REPLACE TORPEDO LASSO

At Newport, R. I., the Navy demonstrates how it retrieves torpedoes after practice runs—a story that until recently has been blacked out. The secret is a pair of automatic tongs (above) developed during the war by Pittsburgh Heppenstall Co., to replace less efficient lassos. The tongs are suspended on a hook running down from a power hoist. As they lower to the water, they automatically unlock; when the hoist starts to pull, the tongs grip their catch. Similar tongs have long since been designed for solid peacetime use—to handle sugar sacks, boxes, steel in coils, auto frames, and machinery.

Drain on Sugar

Stocks are expected to drop below safety level when new stamp is validated. Gain in beet yield is expected.

Government sugar experts forecast that consumers' cash-in of sugar stamp No. 38, Sept. 1, will strip grocery shelves of available supplies for weeks to come. The stamp is good for 5 lb. that must last housewives through Dec. 31.

Worse, these officials foresee that by Oct. 1 the stocks of sugar in primary distributors' hands will be far below the 600,000 tons normally regarded as necessary to keep supplies rolling in trade channels.

• **Beet Yield Gains**—Sugar stocks will increase during the last quarter of the year as new sugar comes from this year's beet harvest, currently calculated to yield 365,000 tons more sugar than last year's 985,000 tons—a 37% increase.

Just the same, sugar will be extremely scarce until new-crop sugar is available from Cuba and other cane-producing areas after the turn of the year. The 1946 Cuban crop is expected to be

somewhat larger than the 3,900,000 tons of raws produced in 1945.

• **Deal Pending**—The Agriculture Dept. has not as yet negotiated the purchase of 1946-crop Cuban sugar, though Secretary Clinton P. Anderson has said that Cuba has said that the bulk of the 1946 production would be available to the U. S. (BW—Jun. 30 '45, p. 32).

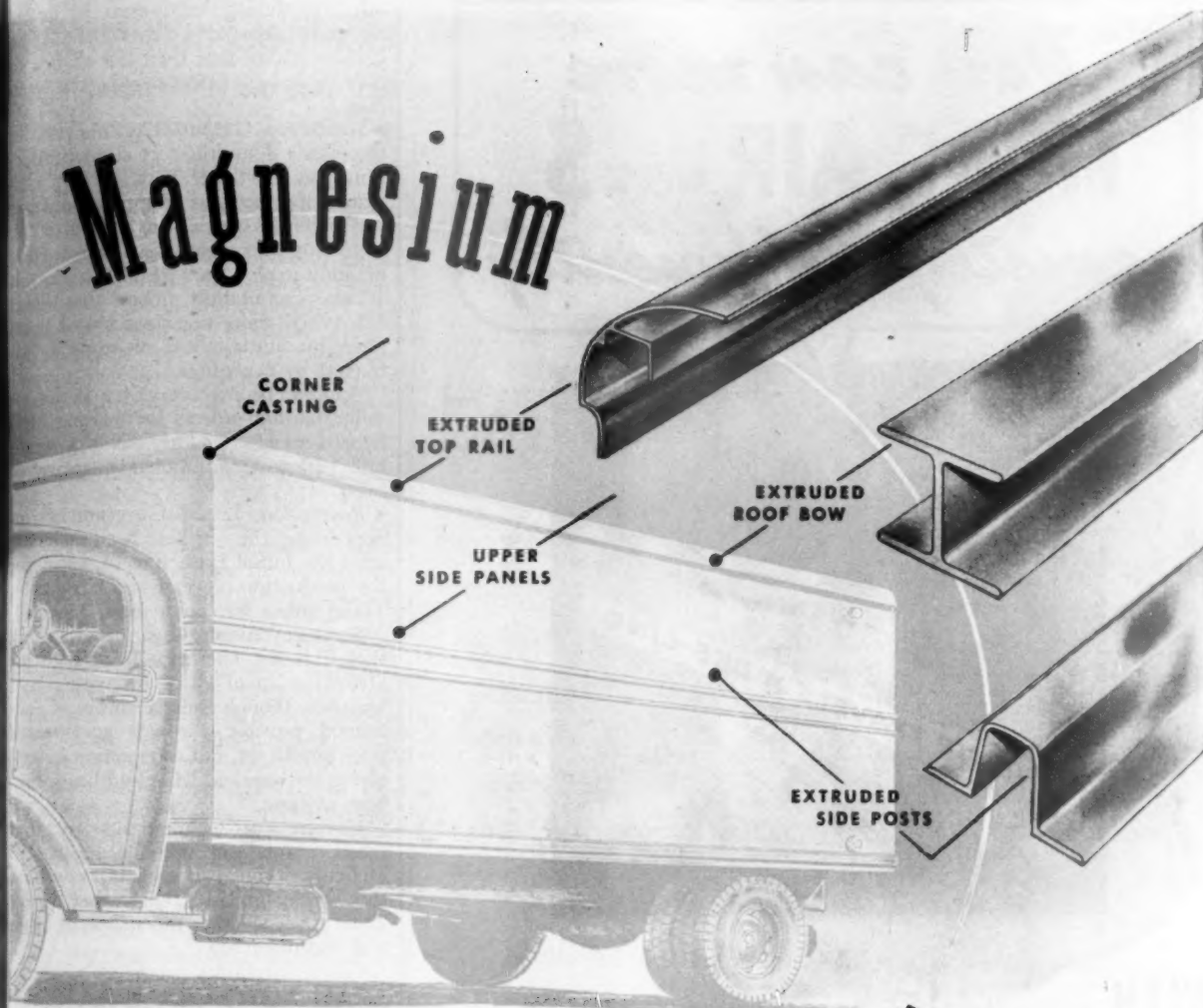
The U. S. offered price is \$3.45 per 100 lb. compared with \$3.10 for the 1945-crop Cuban raws, but it is not known whether the residual blackstrap will be bought by this government.

If the blackstrap is not purchased by the government, the Cubans will make all the blackstrap they can into rum, candy, and alcohol (for motor fuel), and sell the remainder to beverage and industrial alcohol distillers in the U. S. and other countries. They may also insist on holding some sugar and making cane into high-test invert molasses for the same purposes.

• **More Cuban Cane**—By 1947 it is expected that the Cuban crop may reach a record 6,000,000 tons of raw sugar provided the weather is favorable to cane. Producers, meanwhile, have prepared to cane the record acreage plowed ready for 1946 plantings.

So large a 1947 production may run head on against increased supplies from

Magnesium



...makes a Big Difference in Topside Weight of Truck Bodies

There are so many places where magnesium can save weight! Side posts, roof bows, top rails, and other extruded shapes, clip angles, upper side panels, roof sheeting and corner castings. Many more applications for magnesium may come to light when talking it over with our engineers.

Savings of around half a ton on a single job can be accomplished by designers who

think in terms of magnesium. They know that lighter weight means higher efficiency, lower operating costs and greater payloads.

Call on us to assist you in employing the weight-saving properties of magnesium to best advantage. Write to Aluminum Company of America, Sales Agent for Mazlo Magnesium Products, 1711 Gulf Building, Pittsburgh 19, Pennsylvania.

MAGNESIUM



PRODUCTS

AMERICAN MAGNESIUM CORPORATION

SUBSIDIARY OF ALUMINUM COMPANY OF AMERICA

You can move
MORE AIR per \$
quietly... efficiently



WITH **"Buffalo"** **AXIAL FLOW FANS**

● On a wide range of industrial applications, Buffalo Axials are the fans to install—in point of space saved, quietness, economy of maintenance.

The special design of these fans results in the delivery of the air stream in a true axial direction. Air turbulence is reduced to a minimum, thus preventing power losses common to ordinary propeller fans. Performance shows high efficiency. Construction embodies typical Buffalo sturdiness, the Buffalo "non-overloading" characteristic, Buffalo dependability. A wide range of capacities, belt-drive and direct-drive. Bulletin on request.



BUFFALO FORGE COMPANY

458 BROADWAY, BUFFALO, N. Y.

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

other producing areas—even in excess of world demand at that time. The Cubans realize that their last chance to cash in on high prices may be the 1946 crop.

• **Increasing Output**—The increase in this year's domestic beet sugar production may be larger than current estimates, if processors can get the labor and materials needed to Steffenize the 1945 crop beet molasses for the recovery of additional sugar. (Steffenization is a lime precipitation process that yields 5% to 6% more sugar per ton of beets after the initial yield of sugar is extracted by centrifuge.)

Another beet-recovery step is the so-called barium process for treating Steffenized molasses. This yields a small, but high-cost, additional quantity of sugar.

• **Restriction Lifted**—Government orders during the war held back molasses, after the initial extracting of sugar, for the production of yeast and citric acid. These orders have now been canceled.

Some government sugar experts think that it is too late now to arrange for Steffenization of all of this year's beet molasses, though some recovery is considered possible through government price incentives, and cooperation in supplying the required labor and heavy tonnage of lime.

Government technologists say that yeast makers can use the residue of Steffenized molasses equally as well as the whole molasses, but they don't know as yet whether this is true of citric acid manufacture.

SCAN AUTO CRASH RATES

Automobile owners soon will find at least one fly in the unrationed gasoline—higher collision insurance rates.

The National Bureau of Casualty & Surety Underwriters, which scaled down its bodily injury and property damage rates soon after the start of gas rationing (BW—Oct. 31 '42, p89), now is busy working out a new rate structure. When the revised rates take effect, they will put automobile liability insurance rates back on something like their prewar footing.

Since gasoline rationing began, the underwriters have been using a simplified classification system for bodily injury and property damage policies and have allowed a flat 10% cut in the old base rate. In addition, bodily injury rates have been cut 20% for A card holders, 10% for B cards. There has been some grumbling about the wartime rates among the big insurance companies, which contend that in spite of lighter traffic and slower driving speeds the reduction in rates was bigger than the reduction in accidents.

More Air Controls

Examiners suggest that Civil Aeronautics Board put nonscheduled transport service under federal registration.

A carefully considered plan to permit the growth of the air transportation activities of the fixed-base operator, but with a restraining hand to restrict competition with the big trunk-line carriers, has been suggested to the Civil Aeronautics Board by two of its examiners.

• **CAB Control Coming**—The report is a step in the investigation of nonscheduled air services ordered by CAB in July, 1944. As such, it is being studied closely throughout the air transport industry for a hint of the line the board may pursue in its regulation of this type of operator.

Such regulation appears inevitable. A board action of Dec. 7, 1938, exempted nonscheduled air transport service from economic regulation. The investigation was started to determine whether and to what extent regulation is needed. Safety rules for nonscheduled air carriers have been under consideration by the board and Civil Aeronautics Administration since 1940. The war held them up until recently, but proposed regulations to provide for issuance of operating certificates and establish operations rules just recently were submitted to the industry for comment.

• **Would End Exemption**—In their report on the economic investigation, the examiners recommended termination of the existing exemption of nonscheduled service and substitution of a new order to classify fixed-base operators and require their registration with CAB. At the same time, they would narrow the distinction between scheduled and nonscheduled operation, in a move that would permit the fixed-base operator to conduct, without a certificate of convenience and necessity, regular air service, on schedules of desired frequency, between cities not on a certificated route.

To discourage development of services paralleling certificated routes, such trips would be restricted to a "casual, occasional, and infrequent basis," with an arbitrary top of ten a month suggested as the limit.

• **No Threat to Airlines**—After decrying the lack of data which might permit accurate appraisal of nonscheduled air transportation, CAB's examiners emphasized that "no one, not even the advocates of the greatest amount of economic regulation, such as the Air

Engineers,

HELP, HELP!

This is about toy balloons and club soda . . . mixed with imagination.

¶ A toy manufacturer mused over our Soda King

Super-Chargers. You know . . . those little cartridges that shoot carbon dioxide into plain water to make soda. ¶ Inspiration! Why not fill the cartridges with *helium*, use 'em to make his balloons fly? He did. And the balloons did. ¶ Now we don't think you want to inflate balloons. Our point is that we've developed many interesting devices to do certain jobs. ¶ They could do other jobs. What jobs? You tell us! ¶ We're using gases—under-pressure to inflate life rafts . . . to whip cream . . . to operate aircraft brakes in emergencies . . . to power toy jet-planes . . . to detect and clear stoppages in jammed machine guns. ¶ By a stretch of the imagination—call it creative engineering—you might find here a solution to a problem of yours. ¶ We'll be glad to stretch our own elastic imagination to meet yours. Something good may come of it!

Just drop a line to:

Walter Kidde & Company, Inc.,
140 Cedar Street, N. Y. 6, N. Y.

Kidde

IDEA LABORATORY



NOW! MAKE PHOTOCOPIES IN YOUR OWN OFFICE Quickly, Accurately, at Low Cost!



Photo-Copier

\$55

Copies up to
18" x 22"

Also continuous cab-
inet models for prints
of any length, up to
48" wide.

Make permanent, error-proof copies—
1-a-minute—of anything written,
typed, printed, drawn or photographed
—even if on both sides. No darkroom
or technical knowledge needed. Save
time, money, labor—expedite work in
every department. Write for facts NOW!

AMERICAN PHOTOCOPY EQUIPMENT CO.

2849 N. Clark St., Dept. B95,
Chicago, 14, Ill. (Representatives in
principal cities and Canada)

**The APÉCO
PHOTOEXACT**
"Copies Anything!"

**AMERICA'S MOST WIDELY USED
PHOTOCOPY EQUIPMENT**

LETTERS

VAL-
UABLE
PAPERS

BLUE
PRINTS

PICTURES

CHARTS

FINAN-
CIAL
DATA

CLIPPINGS

CONTRACTS

OVER
100
OTHERS

WELSBACH

**ENGINEERING
and
MANAGEMENT
CORPORATION**

All phases of
**GAS and ELECTRIC
UTILITY**

**MANAGEMENT
CONSTRUCTION
APPRAISAL**



**1500 WALNUT ST.
PHILADELPHIA 2, PA.**

Transport Assn. and some of the exist-
ing air carriers, advanced the claim that
the volume of business heretofore done
on a nonscheduled basis has been of
such proportion or character that it con-
stituted a threat to the economic sta-
bility of the existing system."

The fixed-base operators contend,
rather, that they have not competed
with existing carriers and that their
future type of service will complement
trunk-line services by providing connec-
tions with off-line points (BW—Mar.
24'45,p52).

Air Fare vs. Rail

**New passenger rates put
plane ticket on many important
routes below first-class train,
plus lower berth, charges.**

Domestic airlines, nudging the rail-
roads a little closer in competition, have
cut their passenger fares to an average
of 41¢ a mile, a rate that on many
important routes put the price of a
plane ticket below the cost of first-class
rail travel plus lower berth.

• **Now in Effect**—The latest reduction
was initiated by American Airlines.
Other transcontinentals joined and
smaller lines followed suit, with the
exception of two, Delta and Mid-Con-
tinent, already well below the former
rate of 5¢ a mile. The reductions went
into effect Aug. 20.

It is doubtful, however, that the air-
lines will make much of the cuts pub-
licly until they have completed their
part in troop movements and until pri-
orities are eased.

Comparison of the new air fares with
rail (first class, plus lower berth) shows
that between New York and Los An-
geles the plane fare is \$119.10, railroad
fare (plus lower berth) \$124.72. Be-
tween New York and Chicago the com-
parative figures are \$33.65 and \$36.93;
between Chicago and Kansas City,
\$18.85 and \$18.66; between Miami and
New York, \$56.65 and \$56.84; and be-
tween Denver and Washington, \$69.55
and \$73.37.

• **45¢ a Ton-Mile**—The new passenger
fare, on the basis of 200 lb. per passen-
ger, including baggage, corresponds to
45¢ a ton-mile, the same rate as that
proposed by the Civil Aeronautics Board
for mail transportation by the Big Four
air carriers—American, Eastern Air Lines,
Transcontinental & Western Air, and
United Air Lines.

Last January the board directed these
lines to show cause why their mail rates
should not be reduced from the present
60¢ to 32¢ per ton-mile (BW—Jan.

Coming Attraction

Leo Seltzer, roller bunion im-
presario (he runs skate derbies in
56 cities), already owned the old,
stone Armory at 16th St. and
Michigan Ave., Chicago, a year
ago when he organized a syndi-
cate that paid approximately a
song for a neighboring white ele-
phant, the Coliseum.

Chicago's Coliseum in its half-
century has housed many a super-
stupidous attraction from grand
opera to circuses. Seltzer planned
his "Alaskan Stampede" last sum-
mer to outglamor the old-timers,
but it missed the box office and
failed to lighten the hearts of the
real estate owners.

Now he has another terrific idea
to make him the Barnum of Busi-
ness. This is the nation's "first,
biggest, only" Products of Tomor-
row Exposition. Tentative open-
ing is set for April, duration 90
days. Seltzer blithely plans a 90-
day stand each year, with 500 ex-
hibits of consumer and industrial
goods to attract some 3,000,000
visitors.

The Seltzer press department is
awaiting formation of a not-for-
profit corporation to operate the
big show, plow back profits into
scholarships for deserving young
designers and engineers, and rent
both Armory and Coliseum.

20'45,p42), but shortly before the pas-
senger fare reduction was due, the board
revised the proposed mail rate upward
to 45¢.

The revision was attributed officially
to rapidly changing war and equipment
conditions, but some airline sources felt
that it may also have been affected by
the willingness of the lines to cut their
passenger fares.

DESIGNS NEW PLANE

American Airlines is working with
aircraft manufacturers to produce a new
plane designed for maximum efficiency
and flexibility on routes and feeder
lines requiring comparatively short hauls
and frequent stops.

Specifications have been submitted to
several manufacturers asking delivery
dates and prices on 25 to 100 such air-
craft. It is estimated that the planes
will cost around \$200,000 each.

The design envisions loading be-
tween the extremes of 30 passengers and
a cargo of 500 lb. and 20 passengers
and a cargo of 2,500 lb. Minimum pay-
load will be 6,500 lb., with a range of

im-
s in
old,
and
year
ndi-
ly a
ele-

half-
aper-
rand
ned
sum-
ners,
and
f the

idea
Busi-
first,
mor-
open-
n 90
a 90-
0 ex-
strial
0,000

ent is
t-for-
e the
into
oung
rent

the pas-
e board
upward

officially
equipment
rces felt
ected by
ut their

ng with
ce a new
efficiency
feeder
ort hauls

mitted to
delivery
such air-
e planes
h.

ing be-
gers and
assengers
um pay-
range of

1, 1945



ANY SMOKESTACKS TO PAINT?

The tricky job of painting high smokestacks is one of many suggested to us for helicopters to handle. All that would be needed is a hose and nozzle leading from a paint tank inside the fuselage; operating while the aircraft leisurely circles the stack from top to bottom:

An apple-grower writes us, outlining the possible advantages of helicopters to dust his orchards.

A South American government would like a fleet of helicopters, in order to annihilate with sprays the swarms of locusts which now destroy valuable crops:

Ranches want helicopters for such work as taking cattle censuses on their vast ranges—dropping salt for their grazing stock—delivering fresh grub to distant round-up crews in rough country.

Hundreds of business executives have written to us here at Kellett Aircraft, to point out ways in which they think postwar helicopters might be useful. Ques-

tions of weight, range, cost and mechanical reliability make some of those ideas impossible to execute at the present stage of helicopter progress.

However, the number and diversity of these proposals impress us with the future possibilities of an aircraft which can hover or take off from, and land vertically in, any area large enough to permit the sweep of its revolving rotor blades.

We continue our part of the job as designers and engineers; confident that, with further development of helicopter types, American businessmen will determine many applications in transport and industry where only the helicopter can serve to cut costs, give dependable service and make work more productive. In consultation with such executives, our development program is taking shape today.

Kellett Aircraft Corporation, Upper Darby (Philadelphia), Pennsylvania.

★ **KELLETT HELICOPTERS** ★

RADIO and RADAR

**Cloak of Protection
for Giant Airliners**



Use

CLARE "Custom-Built" RELAYS

In these Pan-American ships of tomorrow . . . now being built . . . you will travel swiftly, comfortably and safely.

Important to their safety is the radio and radar equipment of which Clare "Custom-Built" Relays are important components. Radio beams will guide them to their destination, radio will keep them in touch with airports, and radar will keep pilots informed as to location regardless of weather.

Choice of Clare Relays comes from the experience of Pan-American engineers with their dependability in many previous applications. These engineers know how Clare "Custom-Built" Relays withstand extreme vibration, resist severe shocks, yet are absolutely reliable for long service.

Are your engineers designing new products? Are they seeking new ways to improve your present line? If so, they will want to know all about Clare "Custom-Built" Relays and what this "custom-building" can mean to your specific relay problem. Send for the Clare catalog and data book today. Address: C. P. Clare & Co., 4719 West Sunnyside Avenue, Chicago 30, Illinois. Sales engineers in principal cities. Cable address: CLARELAY.



CLARE RELAYS

"CUSTOM-BUILT" Multiple Contact Relays for Electrical, Electronic and Industrial Use

700 mi. cruising at 275 m.p.h. at 10,000 ft. against a ten-mile headwind.

Such a ship would complement the present 21-passenger Douglas DC-3s and the forthcoming DC-4s and DC-6s, the latter having a capacity of 55 passengers and speed of 334 m.p.h. for transcontinental or transoceanic runs.

Standards of passenger comfort are those of the DC-3, with a buffet, storage compartment, luggage racks. Basically the design does not include pressurized cabins, but the airline has asked submission of data on an alternate design including sea-level pressure at 8,000 ft. and summer cooling.

BUSHELS FOR DISTILLERS

The Dept. of Agriculture eased up on the distillers this week, allowing them 3,000,000 bu. of grain per month for the rest of the year. This marked an increase of 500,000 bu. over the July allowance but still disappointed trade expectations by a million bushels (BW—Aug. 25 '45, p. 28).

Bourbon addicts get no comfort from the new quotas, since the use of corn is still prohibited because of the outlook for feed grains. The only ray of hope was a guarded intimation that the de-



NAVY'S READING KIT

In San Francisco, a Wave displays "pony" editions of some of the 32 magazines that are packaged into a kit for overseas shipment. Each week, Navy personnel—on board ship or ashore—get 15,000 copies of various U. S. weeklies and monthlies, free of charge. Large ships and bases receive one kit for each 150 men; smaller vessels and bases rate at least one apiece. The miniature magazines carry no paid advertising.

partment might permit the distilling of some corn later if the crop justifies it. Distillers normally used 3,000,000 bu. of grain monthly in prewar production. Capacity was swollen to almost 7,000,000 bu. monthly by the synthetic rubber industry's alcohol demands. The cutback and the end of round-the-clock operation will mean a sharp drop in employment from recent peaks.

L-85 Still Stands

Many in dress industry fear dire results if fashion edict is lifted too suddenly. Others favor revocation now.

Dress manufacturers have been in suspense since the close of the war, waiting for action by Washington on L-85, the fashion conservation order, which has kept down the yardage and furbelows on women's apparel (BW—Apr. 18 '42, p. 32).

• **For and Against**—No decision has been made, and L-85 is being tossed back and forth in WPB meetings while manufacturers have pressed for and against retention of the order. At this point it looks as if the government may retain the order until Oct. 1 at least. This delay would give manufacturers time to deliver orders and enable retailers to move already-stocked fall merchandise which might go begging if customers could demand new fashions, styled along more generous lines.

Some manufacturers would be glad to see the retention of L-85 until December, which would give sufficient time to put the spring designs on a free basis, with the certainty that fall and winter retail buying would be well under way.

• **What Many Fear**—In the opinion of many manufacturers, rescinding the order just as the fall season begins would result in the cancellation of orders, leaving hard-to-move stocks of outmoded styles and flooding the market with hastily planned and poorly executed styles. The most serious result, the trade argues, would be a reduction in the total number of garments produced because of the sudden shift in style trend while textiles are still very tight.

While the greater number of manufacturers favor temporary retention of L-85, there is a minority, with a certain popular backing, which would like to see the immediate return to free competition.

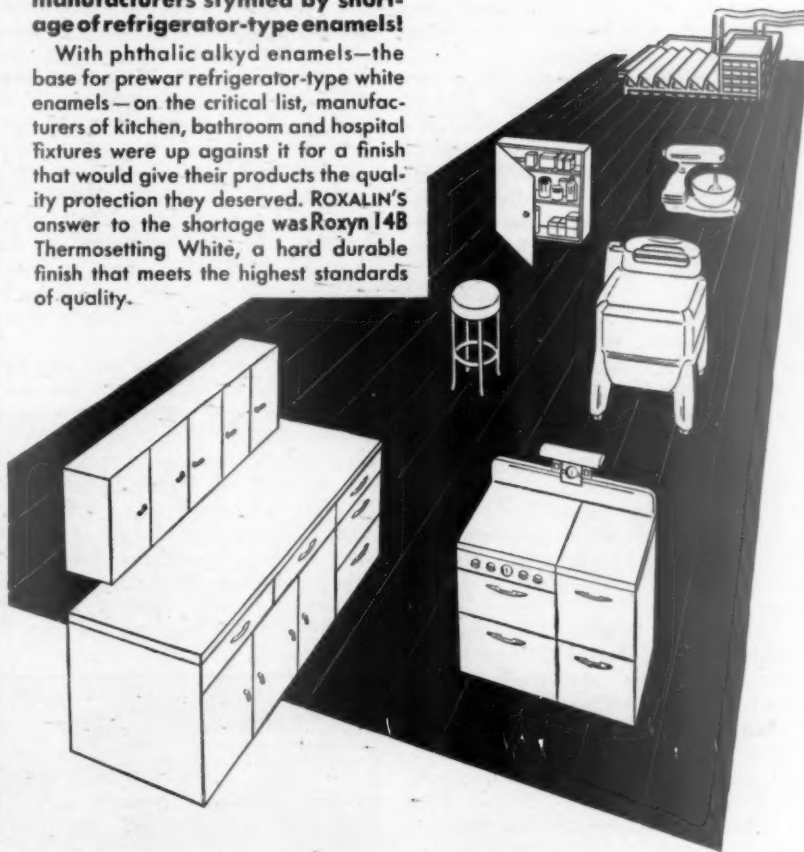
As for the effect on retail stocks, some merchants hold that, because goods have been so hard to get, they will move in spite of drastic style changes.

Reconversion

PROBLEM LICKED!

ROXALIN came to the rescue of manufacturers stymied by shortage of refrigerator-type enamels!

With phthalic alkyd enamels—the base for prewar refrigerator-type white enamels—on the critical list, manufacturers of kitchen, bathroom and hospital fixtures were up against it for a finish that would give their products the quality protection they deserved. ROXALIN's answer to the shortage was **Roxyn 148 Thermosetting White**, a hard durable finish that meets the highest standards of quality.



HERE is just another example of ROXALIN engineering ingenuity that has solved many, many finishing problems for thousands of manufacturers. Feel free to call on us to help you with your production difficulties. Write to department 957 for complete information.



ROXALIN Flexible FINISHES
INCORPORATED
ELIZABETH, F. • NEW JERSEY



ROXALIN specializes in engineering and surface coatings the strength, beauty and chemical resistance inherent in the basic plastic. For over 20 years of research and production facilities have been concentrated on this task. The result are proved by the well-known products which look and wear better because of these efforts. The detailed story of these years of achievement is told in "20 Years of Plastic Surfacing" ... write for your copy today.

... write for your copy today.

Jahco Accused

Machinists' union charges that Cleveland concern attempts to coerce Jack's "associates" on Wagner act rights.

Jack & Heintz, Inc., the Cleveland concern noted for its high wartime pay, free meals, and Florida vacations for workers, last week found itself accused of coercing its employees.

• **NLRB Gets Charges**—On the basis of charges filed by District 54 of A.F.L.'s International Assn. of Machinists, the regional office of the National Labor Relations Board issued a complaint accusing Jahco of restraining its workers in the exercise of the right to self-organization. Hearing was set for Sept. 25.

In addition to charging Jahco officials with making disparaging remarks about the union with which it had a closed shop agreement, the complaint contends that the concern fired three employees and transferred another to less desirable work because of union activities and interfered with the election of union officials.

• **Double Headache**—NLRB issued the complaint even as Jahco's president, Bill Jack, was engaged in an uphill struggle to get his plants converted for peacetime production.

On record as wanting to buy the two Jahco-operated Office of Defense Plants factories for postwar operation in addition to the seven buildings wholly owned by the company, Jack says his firm will need them all during the next ten years of industrial prosperity which he predicts.

• **What Products?**—Jack maintains a discreet silence on the nature of Jahco's postwar products, but it is known that before victory the concern had developed plans for a gasoline engine for the Army Air Forces. It is now reported that Jahco will produce such an engine for use in light civilian automobiles. In anticipation of wartime production of the engine, a factory had been purchased and orders placed for machine tools and other equipment. Two weeks after hostilities ceased these orders had not been canceled.

Other peacetime products which Jahco conceivably might turn out include fractional horsepower electric motors and ball bearings, items on which the company had wartime experience. In addition, it has been reported that Jahco has plans to enter the home electrical appliance field.

• **Lacks Sales Force**—But Bill Jack has problems beyond the fields of new

products and labor relations. Jack & Heintz, Inc., did not exist before the war, and during the war it had only one customer, the military services. Hence Jahco came out of the war without a sales department. If the concern invades the highly competitive fields with which rumor now connects the company, it is generally accepted that it must build a sales department—and from the ground up.

During wartime, finances were not a serious problem for Jack. For the future, company spokesmen point with some pride to the \$15,000,000 nest egg laid away a year ago through sale of preferred stock to the company's 6,700 "associates" for just such a postwar contingency.

• **Behind the Quarrel**—Back of Bill Jack's current labor trouble is the rift that developed in July, 1944, when Matthew DeMore, president of the machinists' District Council, advised Jahco employees against subscribing to Jahco stock issued to finance postwar expansion (BW—Aug. 5 '44, p. 58). A wordy exchange between Jack and DeMore left the union leader on the short end because 98% of the company employees did buy the stock (BW—Sep. 2 '44, p. 106), and assign voting rights to Jack and Ralph Heintz as trustees.

Shortly thereafter, when Local 439 of the union held an election of officers, charges were made that Jahco employees, who held the balance of power in the local, were fighting DeMore, a member of the local, with a view to

defeating him and making him ineligible for a place on the District Council. Ballots were impounded by order of the international union and the old officers, including DeMore, held over.

• **Veterans Rehired**—The showdown came on Aug. 6 when Jack openly challenged the machinists' union by reinstating on the company's payroll discharged servicemen who had been laid off along with 2,000 other employees because they lacked a seniority status (BW—Aug. 11 '45, p. 100). DeMore and the district council revoked Local 439's charter, turned its affairs over to officers of the international, and later filed charges with NLRB.

Except to say that the matter was "a family affair better threshed out over the breakfast table," Jack & Heintz officials preferred to say nothing.

MONOPOLY CHARGED

A monopoly in the distribution of electrical precipitation units often used in smoke elimination is charged in an antitrust suit filed in U.S. District Court in Los Angeles.

Defendants are the Western Precipitation Corp. of Los Angeles, the International Precipitation Co. of Los Angeles, the Research Corp. of New York, and Walter A. Schmidt of Glendale, Calif., president of the two Los Angeles companies.

Named as coconspirators were Howard A. Poillon, a retired president of the Los Angeles companies; Lodge-Cottrell, Ltd.,



PREFABRICATED SHELTER FOR SURPLUSES

To solve the problem of storing vast quantities of tools and other surplus materials, the Davidson-Oakland depot of the Reconstruction Finance Corp., Michigan, utilizes a simple but novel system. The equipment, millions of dollars worth, is stacked neatly on flooring (above), then prefabricated sheds are erected over the pile of materiel, just as it stands.

Home-Family-Job-

**THREE OF THE MOST
IMPORTANT THINGS
IN EVERY MAN'S LIFE**

THE security of a man's home and family depends essentially on his job. In "good times" there seems to be no lack of jobs and the security that steady earnings bring. Can things be planned so "times" are generally "good" — so more of us can enjoy a full measure of security? Here are some facts that point to the answer:

Men and women are employed in industry to produce something — other men and women to sell and service the products of such labor. It is an established economic principle that when we are able to produce more at lower cost, we sell more at lower prices.

Increased sales call for increased production and increased production means more jobs; more jobs and wages in turn, make more sales possible. As long as nothing disturbs

the cycle, industry expands and progresses, and employment increases.

Invention, imagination, research, and hard work, are part of the picture. Airplanes, automobiles, radios, better homes and living conveniences — and the jobs involved in producing them — came into being, not by any wave of a magic wand, but because Americans wanted them, and were willing to put forth the effort to produce them.

It's this American will to progress which has built American industry and the millions of jobs it provides.

The source and real foundation for jobs lie in the fact that more and more employment is made possible by producing more and better things at lower and lower costs for Americans to use and enjoy.

**KEARNEY
& TRECKER
MILWAUKEE 14,**



**CORPORATION
WISCONSIN**



Recognize and respect the wearer of an Honorable Service Button. It is a badge of honorable service issued by our Government to veterans of the Army, Navy, Marine Corps and Coast Guard.



★ Industrial records prove that output per man-hour increases at the rate of approximately 50% every ten years. This National Industrial Par is the foundation of American industrial leadership and high living standards.

★ Elimination of waste — plus improved production techniques — plus the most modern machine tools are the controlling forces that increase output per man-hour and cut production costs.

★ Ability to cut costs — not the cost of the tools themselves — are the deciding factors in determining machine tool needs. At least 10% of the total machine tool investment should be set aside yearly for machine tool replacement to enable your company to cut production costs — attain or excel Industrial Par.

Milwaukee Machine Tools

BETTER PRODUCTS — BETTER EARNINGS SPRING FROM BETTER MACHINE TOOLS



Investigate **TENNESSEE!**



Investigate its **POWER**

The abundant TVA hydroelectric power at the lowest rate in Eastern America.

Investigate its **LABOR**

Cooperative skilled and semi-skilled native-born labor.

Investigate its **BASIC INDUSTRIAL ADVANTAGES for YOU**

Write for survey and specific information relating to your particular requirements. It will pay you to INVESTIGATE TENNESSEE.

Investigate its **RAW MATERIALS**

An unsurpassed variety of major industrial minerals and agricultural products.

Investigate its **LOCATION**

A central location that permits 24-hour delivery to more than 51% of the Nation's population.

Investigate its **TRANSPORTATION**

Excellent air, water, highway and railway facilities with equalization of class rates.



Birmingham, England; Siemens-Schuckert Werke, A. G., Berlin; Metallgesellschaft, A. G., Frankfurt, Germany; Siemens-Lurgi-Cottrell-Elektrofilter-Gesellschaft, M. G. H. für Forschung und Patentverwertung, Berlin; and Precipitation Co. of Canada, Ltd.

The complaint said that the units have been used in the production of high-octane gasoline, steel, synthetic rubber, aluminum, tin, air-conditioning equipment, phosphorus, magnesium, coal tar products, and many chemicals. It is contended that the five foreign coconspirator companies agreed to engage in no business in the United States and the American companies agreed to refrain from business outside the Western Hemisphere and United States possessions.

Still "Bon & Tam"

Denver Post ownership remains as famed publishers provided in their wills. Stock need not be disposed of.

The status quo of ownership of the Denver (Colo.) Post was preserved in an opinion handed down in Denver last week by U. S. District Judge Henry S. Lindsley.

• **Trustees Asked Ruling**—Trustees of estates left by Fred G. Bonfils and H. H. Tammen, the famous "Bon & Tam" who built the riproaring western newspaper into one of the most profitable of U. S. publishing properties, had asked Lindsley to rule on their right to continue ownership for trust beneficiaries of large blocks of Denver Post stock. He ruled that they had the right.

The trustees—the First National Bank of Kansas City and the Denver National Bank—had said in effect that they didn't want to continue longer, without specific court sanction, to carry so many eggs in one basket, especially common stocks. Beneficiaries of the trust, among others, include the Children's Hospital of Denver, prize charity of H. H. Tammen and later of his widow.

• **Beneficiaries Content**—Beneficiaries, incidentally, were unanimously opposed to any sale, as they testified that they didn't believe they could get as much income from any other investment of the money resulting from a sale. Lindsley's ruling was based in part on his holding that Denver Post common stock is a substantial investment which has always paid dividends and in the postwar period may pay bigger ones.

Had he ruled against the trustees holding the stock, the effective control of the Post might have been thrown

Schuck-
allgesell-
Germany;
lter-Ges-
ung und
Precipi-

ne units
ction of
synthetic
ditioning
nesium,
chemicals,
foreign
l to en-
ed States
greed to
ne West-
ates pos

m"
hip re-
rs pro-
k need

p of the
erved in
Denver
ge Henry

stees of
nd H. H.
& Tam-
rn news-
fitable of
ad asked
t to con-
ciaries of
ock. He
t.

nal Bank
National
ey didn't
out spe-
so many
common
t, among
Hospital
H. Tam-

eficiaries,
opposed
that ther
as much
tment of
e. Lind-
t on his
common
nt which
d in the
ones.

trustees
e control
a throw

st. I, 1945

wide open with a possible scramble for it, as the trustees control on behalf of the Bonfils estate at least 931 shares; and on behalf of the Tammen estate and the Children's Hospital, 1,041 shares, all out of a total of 5,000.

Other major stock ownerships: Helen Bonfils Somnes, 1,034 shares; Bonfils Foundation, 400; May Bonfils Berryman, 705; executors of Mrs. Tammen's will, 908 shares.

• **Even Better Days Ahead**—Net earnings of the Post for 1942, latest year of record, were \$1,162,000 (BW-Oct. 2'43,p70). This is a decline from 1939's \$1,631,000, but the difference is mainly in increased federal taxes. The newspaper rejected much advertising during the war because of newsprint restrictions, and once it is able to get all the paper it needs, and federal taxes are lowered, earnings should go up.

As a side issue, Lindsley reaffirmed an earlier lower court repudiation of one of the most peculiar provisions ever written into a will. Fred G. Bonfils disliked his son-in-law, Clyde V. Berryman, husband of May Bonfils Berryman, and in his will he left her \$12,000 yearly unless she should "become separated from or become the widow of" Berryman, when the legacy was to increase to \$25,000. A lower court in 1934 held this provision to be contrary to public morals and policy, and awarded Mrs. Berryman her \$25,000 yearly from the estate anyway. In 1943 she got a Nevada divorce from Berryman, which he is now challenging in the Colorado courts.

The trustees asked Lindsley in view of this situation to reclarify Mrs. Berryman's position. He avoided ruling on the Nevada divorce, but reaffirmed the old decision that the provision in the Bonfils will is void.

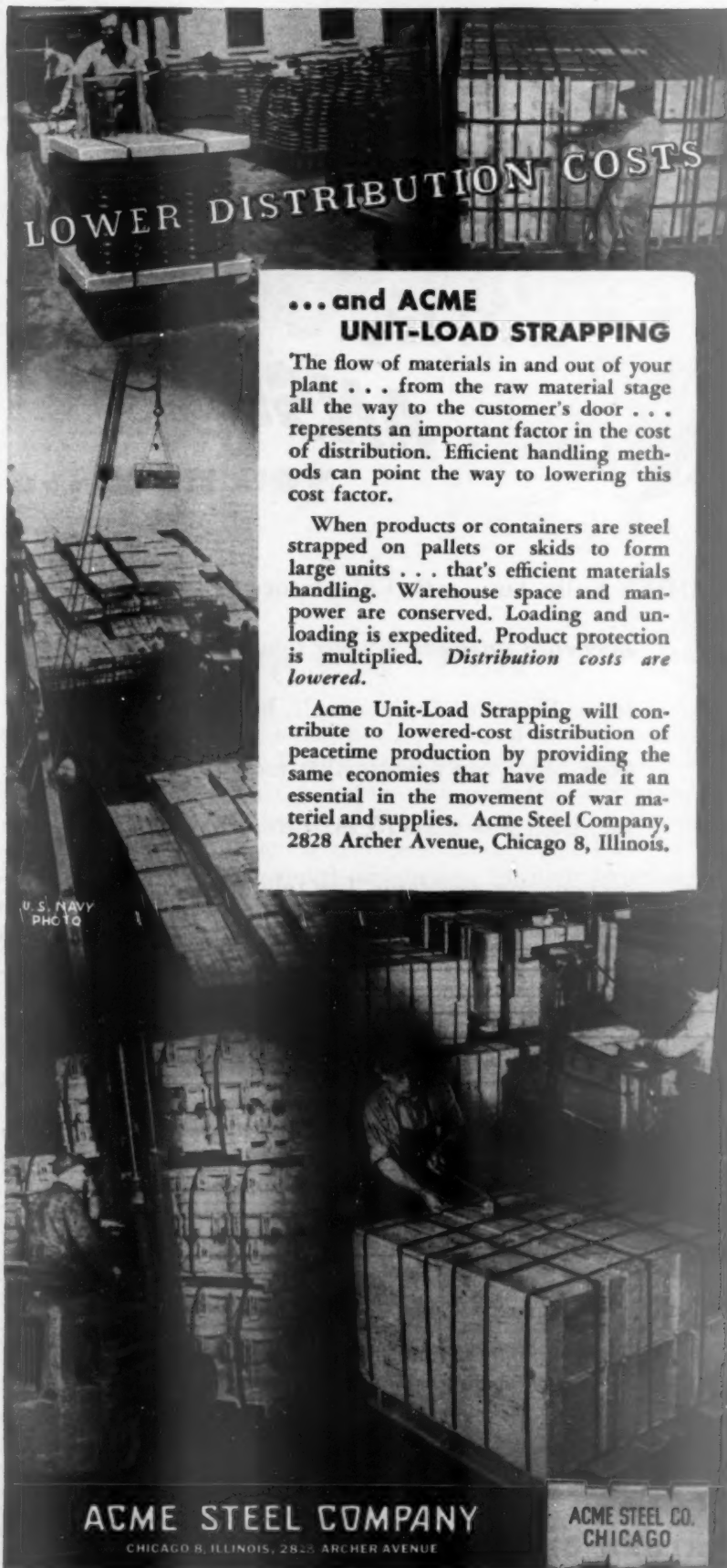
EGG PRICES TUMBLE

The war's end sent the price of eggs on the Chicago Mercantile Exchange into a tail spin this week.

In late summer, egg prices normally remain firm. This season the price on November futures has tumbled in four weeks from 46.3¢ to below 40¢ a doz. (car-lot price, delivered at Chicago).

Several factors that should keep prices up have been negated by developments. Aug. 1 showed a new low in cold storage stocks (5,921,000 doz.). Egg production dropped 6% in the first seven months of 1945 as compared with 1944. And hens just do not lay freely in August.

What overruled normal bullish expectations is a trio of bearish influences. Military buying cuts, previously under way, were speeded. Buying power is plainly due for a fall as war plant



LOWER DISTRIBUTION COSTS

...and ACME UNIT-LOAD STRAPPING

The flow of materials in and out of your plant . . . from the raw material stage all the way to the customer's door . . . represents an important factor in the cost of distribution. Efficient handling methods can point the way to lowering this cost factor.

When products or containers are steel strapped on pallets or skids to form large units . . . that's efficient materials handling. Warehouse space and manpower are conserved. Loading and unloading is expedited. Product protection is multiplied. *Distribution costs are lowered.*

Acme Unit-Load Strapping will contribute to lowered-cost distribution of peacetime production by providing the same economies that have made it an essential in the movement of war materiel and supplies. Acme Steel Company, 2828 Archer Avenue, Chicago 8, Illinois.

U. S. NAVY PHOTO

ACME STEEL COMPANY
CHICAGO 8, ILLINOIS, 2828 ARCHER AVENUE

ACME STEEL CO. CHICAGO

$$\begin{array}{r}
 + \\
 1.725 \times 32.425 = \\
 26.125 \times 6.350 = \\
 938.25 \times 1075.32 = \\
 + \\
 170 \times 250 \\
 \$125 - 10\% \\
 \hline
 1.4753 \times 62.125 \\
 29.5 \quad 0237 \\
 \hline
 365
 \end{array}$$



...if it's
ANSWERS
 you need...



FRIDEN Fully Automatic Calculators will produce *accurate answers* to your figure work problems. Discover for yourself, how anyone in your office can operate this modern calculator, with less than **15 minutes instruction** on your own problems. Just telephone or write your local Friden Representative and arrange for a demonstration. **FRIDEN Calculators** are *now available* to every business. Replace your worn or obsolete equipment with an easy-to-operate **FRIDEN**, learn how the calculator, not the operator, does the work.

Friden Mechanical and Instructional Service is available in approximately 250 Company Controlled Sales Agencies throughout the United States and Canada.

FRIDEN

FRIDEN CALCULATING MACHINE CO., INC.

HOME OFFICE AND PLANT • SAN LEANDRO, CALIFORNIA, U. S. A. • SALES AND SERVICE THROUGHOUT THE WORLD

employment shrinks. And prospects of more generous meat supplies will turn away from omelets many a long-suffering customer who would rather have a porterhouse steak.

Other observers saw in the price break the beginning of a circle of peacetime plenty. First expectable result of lower prices is reduced egg production. Next would come ruthless culling. This would bring more chicken meat to market, make more feed available to cattle, eventually perhaps produce more beef and pork.

ANOTHER ATOM MAGAZINE

The first issue of "The Atom," to be distributed for the present nationally on a once-in-awhile basis, was scheduled to roll from the presses of Atomic Age Publishing Co. of Denver this week.

Articles by physics and chemistry teachers at University of Colorado, University of Denver, and elsewhere, in addition to popularized stories about atoms and the prospect of atomic power by local writers, were to be featured. The publishers are thinking in terms of 100,000 circulation at 25¢ a copy.

Partners in the new publication are J. Stephen Russell and E. L. Perrine of Monitor Publications, and James F. Ferguson, general manager of Atomic Age Publishing Co.

If The Atom catches on it may eventually become a monthly or bimonthly publication. In addition to The Atom, Atomic Age will put out other periodicals, including a periodical for juveniles, and possibly a series of reprint pocket classics which will sell for 12¢ each.

EMPIRE STATE LESSONS

Lessons learned by the New York City fire department during the fire that resulted when a plane hit the Empire State Building (BW—Aug. 4'45, p17) may bring about building code revisions in New York and elsewhere.

An official report on the fire proposed an amendment to New York City's building code which would forbid erection of any standpipe for fire hoses in such a way that protruding parts pass through any long shaft where falling debris can injure it. This recommendation followed the revelation that a standpipe servicing a gravity tank on the 85th floor had been severed by falling plane engine parts at the 54th floor where the 8-in. pipe crossed a fire tower shaft.

Another recommendation which conceivably may also be adopted outside New York calls for some form of modified fire drill for tenants of tall buildings, so they will be able to locate emergency stairs if fire causes elevator failure.

The ATOM NEW SOURCE OF ENERGY



A Tide in the Affairs of Men

On August 6, 1945, an atomic bomb exploded over the Japanese city, Hiroshima.

Its concussion blasted the city, vaporized the fibre of Japan's will to resist, and flashed across the world a light of such glaring intensity that even blind eyes could glimpse the forked road that is presented to humanity's choice and destiny.

It has been a scant fifty years since Pierre and Marie Curie embarked upon their research with the avowed intent of discovering "how the atoms of the universe are put together". Their work contributed radium to the knowledge and use of mankind, but it marked only a way station upon the awesome quest which they announced and which thousands of scientists have since pursued.

Under the compelling stimulus of war, the first major application of the release of atomic force has been in an instrument that raises by an unimaginable dimension our ability to dole out death. We can be devoutly grateful that the scientific leadership of the Allies, and particularly the industrial strength of the United States, brought to us, rather than to our enemies, priority in the development of this dread weapon. But even in its present infant phase, it is clear that ownership of the principle of the atomic bomb carries a trusteeship of terrifying gravity.

We hold in trust a power that is capable of unraveling the very fabric of our civilization.

Equally, it may be susceptible of development as a mighty force for human welfare. But we have proved the destructive use, while the constructive applications are still in the realm of speculation.

Clearly the trust is of a magnitude that transcends national jurisdiction. No walls have ever been built high enough to fence in the spread of scientific knowledge, and even if we were resolved to forego the harnessing of atomic power for peace, it is hopeless to think that its application for war can be held for long as the monopoly of one, or a small group of nations.

At one giant stride our scientific and technological development has so far outdistanced our social engineering, that we have no choice but to turn our full powers of creative imagination to control the forces we have unleashed and to bend them to man's use rather than to his destruction.

Since control is not possible without understanding, I have asked several of my editorial colleagues in the McGraw-Hill organization to present on the pages which follow a non-technical but authoritative account of the known facts and implications of atomic power.

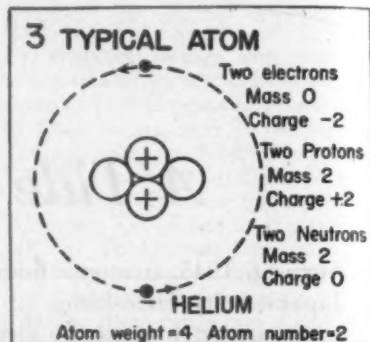
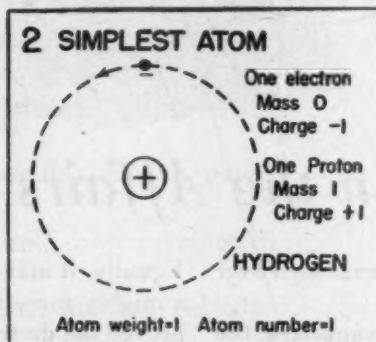
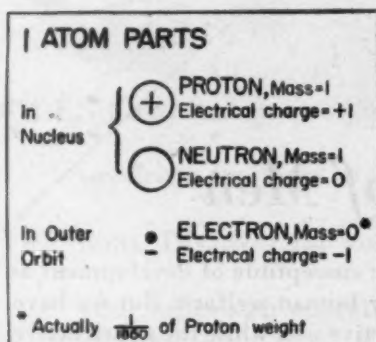
James H. McGraw, Jr.
President, McGraw-Hill Publishing Co., Inc.

HOW ATOM SPLITTING

Five years ago the world learned that the atom of Uranium 235 had been split, releasing energy at the rate of about 11,400,000 kilowatt-hours per pound. The whole amount tested was less than the head of a pin, but there was no escaping the possibility that heaters, engines, turbines, jets and explosives could be powered by atomic energy. Then began the race to win the war with atoms.

With what help England could give, America outran the best atom-splitting team Germany could muster. It was all done in silence. From the summer of 1940 until the atomic bomb blasted Hiroshima, black secrecy blanketed history's most amazing scientific and industrial accomplishment.

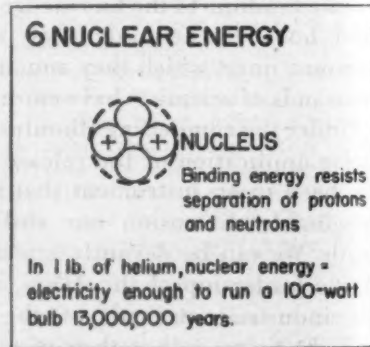
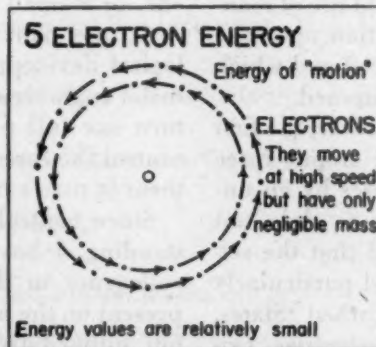
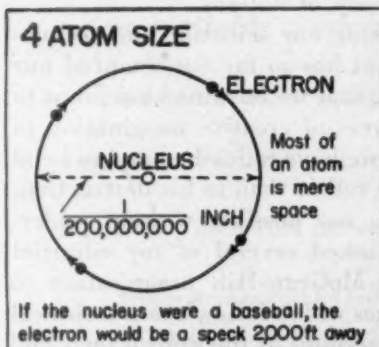
Coldly scientific in form, the War Department's "Smyth Report," released August 12, 1945, traces



Each of the 92 elements has its own atom, yet all atoms are made from the same three pieces, Fig. 1: proton (weight 1, electric charge +1), neutron (weight 1, charge 0), electron (weight 0, charge -1).

Every atom is a tiny "solar system." Its central "sun" has one or more protons, generally neutrons too. The revolving "planets" are electrons, one for each proton in nucleus, because plus and minus must balance in the atom.

The opposite charges attract, but high speed keeps the electrons out in their circular orbits, just as the centrifugal tendency of the revolving earth defies the sun's gravitational pull. All the weight of an atom is in the nucleus, so add the number of protons and neutrons to get the atom's weight. The atomic number is equal to the number of protons. The elements are known by their atomic numbers. Thus uranium (92 protons) is element 92.



With only their outermost orbits touching, it would take half a million atoms to span the thickness of a human hair. Yet if one could expand an atom until its outer orbits encircled 100 acres, the nucleus would be no bigger than a baseball. The atom is mostly empty space, Fig. 4, and nuclei are difficult targets; so much so that a neutron bullet fired at a mass of atoms may pass right through without a hit.

The almost weightless speeding electrons, Fig. 5, supply all the energy of chemical reactions (as when coal burns or TNT explodes). Evading all ordinary chemical action, the immensely greater energy bound up in the nucleus, Fig. 6, can be released only by direct hits on the nucleus to break the bonds that hold the protons and neutrons in a tight bundle.

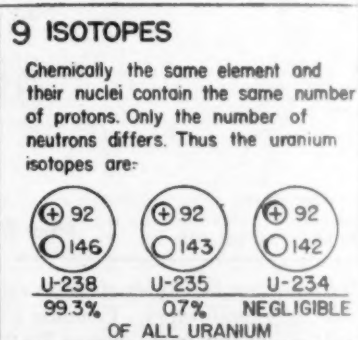
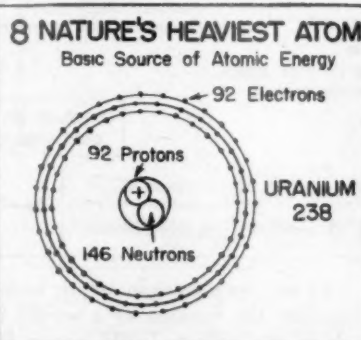
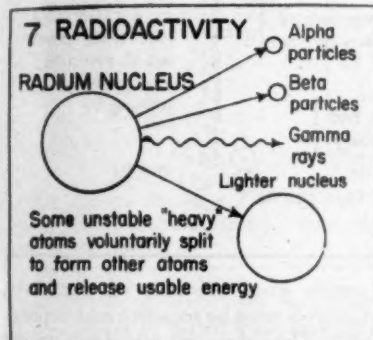
RELEASES ENERGY

the fantastic course of atomic engineering through the five years of news blackout. It leaves no doubt that only a complete mobilization of America's technical resources could have won this victory in time.

Other writers in other places will unfold the epic story. This presentation leaves no space to reflect the glory of the accomplishment or even to record its history. The aim is more immediately practical

— to give the professional and business readers of the McGraw-Hill publications a sound and honest, though non-technical, understanding of this atom-smashing business, so that they will know better what to do about it in their personal and business lives.

Now for step one: learning the shape of atoms and how atom splitting releases energy.



Radium nucleus, Fig. 7, automatically emits particles and energy as it decays to form nuclei of a lighter atom. Most common form of uranium, nature's heaviest atom, is Uranium 238, Fig. 8. This form is not directly useful for energy release, but is important as the raw material for a new synthetic power atom, plutonium.

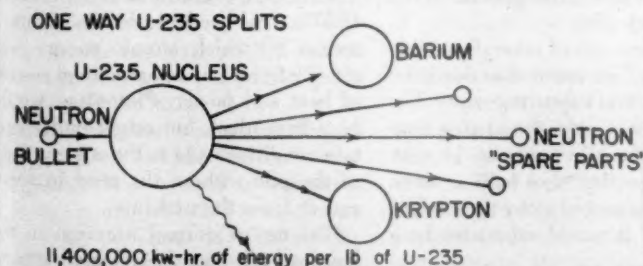
An element may have several *isotopes* — alternate forms with the same number of protons but slightly different

numbers of neutrons. Uranium 238 is the isotope in which protons and neutrons total 238 (so atom weight is 238). It is 99.3% of the total weight of pure, natural uranium. The stuff needed for direct atomic-energy release is Uranium 235, only 0.7% of the total weight and very difficult to separate from 238. To put it another way, every pound of energy-giving U-235 comes mixed with a dead load of 140 pounds of relatively inert U-238.

10 ENERGY RELEASED

11,400,000 kilowatt-hours per pound of U-235

When nucleus of U-235 atom is hit by neutron bullet it explodes to form lighter atoms and spare neutrons whose combined mass is less than mass of U-235. Lost mass is transformed into energy—see Einstein's Law



EINSTEIN'S LAW:

One pound of anything = 11,400,000,000 kw-hr.

when $\left. \begin{matrix} \text{mass} \\ \text{or} \\ \text{energy} \end{matrix} \right\}$ converts to $\left\{ \begin{matrix} \text{energy} \\ \text{or} \\ \text{mass} \end{matrix} \right.$

Applying this law to U-235 split:

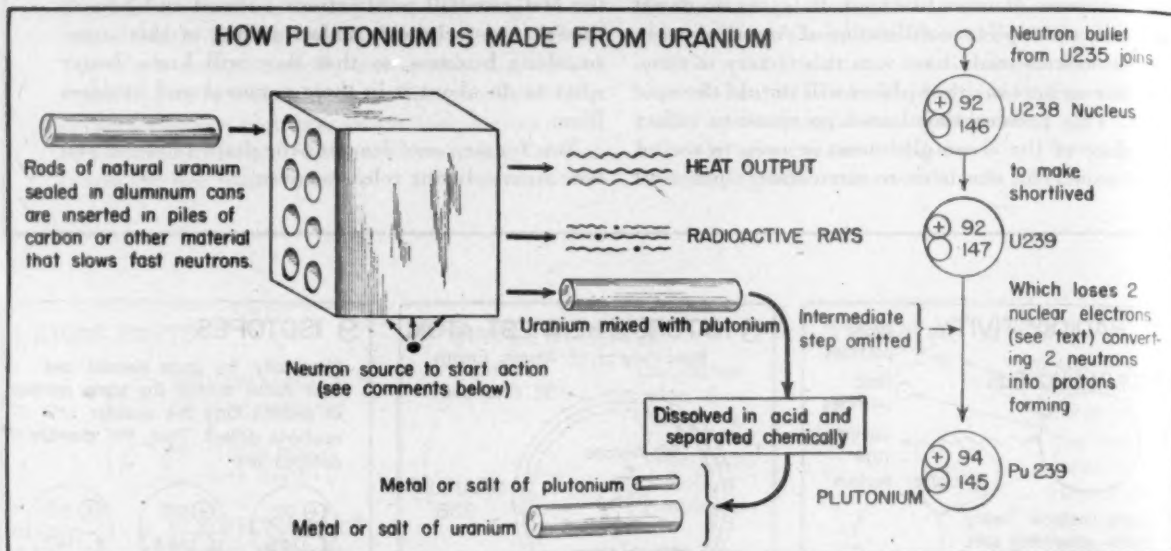
Explosion products of one pound of U-235 weigh 0.9990 lb., so 0.001 lb. of the mass is converted into $0.001 \times 11,400,000,000 = 11,400,000$ kilowatt-hours of energy.

Slow neutron bullet splits Uranium 235 nuclear target, generating two lighter atoms (Fig. 10 shows one possibility) and several free neutrons ready to split other U-235 atoms. The following pages show how the original neutron may be

produced and directed and how a chain of self-propagating atomic explosions may sweep through a block of U-235 like a forest fire to release heat energy equivalent to 11,400,000 kilowatt-hours per pound. **CONTINUED ON NEXT PAGE**

CREATING and ISOLATING

Man-Made Plutonium—U-235 Substitute



We now have two kinds of atoms suitable for energy supply, Uranium 235 and the new man-made element No. 94, plutonium. Uranium, No. 92, has the heaviest atom of any natural element.

The Manhattan Project's plant, on the Columbia River at Hanford, Washington, is the world's greatest atom-making factory. Devoted entirely to the mass production of plutonium atoms, it uses U-238 as the raw material and U-235 as the energy source, intimately mixed in the same proportions as in natural uranium metal.

The production units at Hanford are several huge uranium "piles." Each is a very large block of graphite with holes in which are placed uranium-metal cylinders, sealed in aluminum cans to protect the uranium from corrosion by the cooling water constantly pumped through the pile.

Each pile runs itself, so to speak. Not even the conventionally pictured bits of radium, beryllium and paraffin are needed as a "pilot light" to start operation. There are always enough stray neutrons, or even cosmic rays, to start a chain reaction.

But once started, the design, size and control of the unit must be such that the chain reaction will continue at an even rate—neither die down nor overshoot into an explosion.

To see this picture in atomic terms, consider the fraction of a second in which one million U-235 nuclei are split, producing two million lighter atoms (say, one million of barium and one million of krypton) and between one and three million fast-moving neutron projectiles.

Some of these escape in free flight right through the relatively vast atomic "open spaces." Some are "captured" by the many U-238 nuclei, and others are captured by the impurities. But, on the average, of the one to three million, just one million neutrons must succeed in smashing another million U-235 atoms in the next fraction of a second. Thus, with reproduction rate exactly maintained, life goes on in the atomic-energy pile.

The carbon, one of several possible "moderators," serves to slow down the neutrons without capturing many. The chance of a fast, straight-moving neutron hitting a tiny nucleus is very small, whereas the "slow ball" neutron is likely to be sucked in by the nuclear attraction if it would otherwise be a near miss.

From the practical angle, maintaining a chain reaction requires careful design and good controls. The pile must be slightly larger than actually necessary for a chain reaction (that

means scores of tons of material). Controls must be sensitive and dependable. They slow the pile down to the balancing point by sliding in retarders, such as strips of cadmium.

As already noted elsewhere, the energy released is about 11,400,000 kilowatt-hours for each pound of U-235 split. This energy appears first in the high speed of the pieces thrown off by the atomic split, then is converted to sensible heat as collisions slow down these projectiles. The energy is finally removed from the pile in the form of hot air, steam, hot water or other heated fluid in commercial quantity and thermal condition.

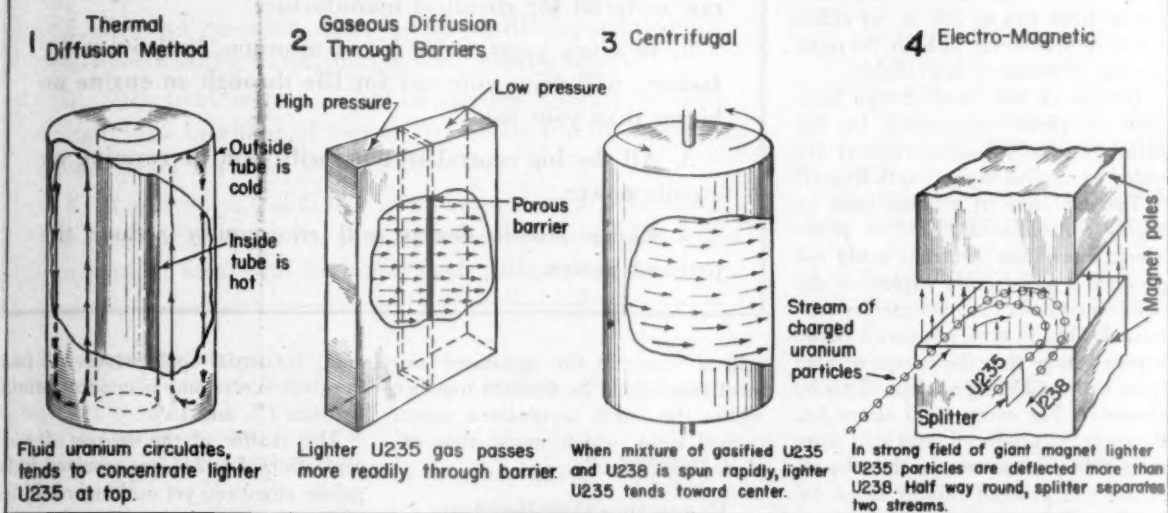
Such piles, operated with normal uranium, or with uranium enriched in U-235, would seem to be the primary means by which atomic energy will serve (if ever) as a commercial source of heat and power. Plutonium would be a byproduct, but might under certain conditions add to the energy yield of the pile without the need to separate it from the uranium.

The use of normal uranium in the Hanford pile sounds extremely attractive as a heat source, but has certain economic disabilities. Only a small part of the U-235 is used up before the pile must be shut down to remove the plutonium.

G THE HIGH-POWER ATOMS

Isolating U-235 — a Gigantic Task

FOUR WAYS TO SEPARATE U235 FROM U238



Many of the uranium ores, including most samples of pitchblende and carnotite, will yield from 1 to 15% metallic uranium. Chemical separation of the metallic "natural" uranium is simple. Whatever the source, natural uranium contains the three isotopes in the constant proportions of 99.3% U-238 and 0.7% U-235, with traces of U-234.

Separating the U-235 from U-238, an operation essential for explosive uses of U-235, and probably important for future commercial controlled-chain piles, has been most difficult. Chemical separation was impossible because U-235 and U-238 are chemically the same.

The only possibility was a separa-

tion by physical differences, primarily a one percent difference in weight. The porous barrier and centrifugal methods pictured above required vaporizing a salt of uranium. All the methods shown have been used or tried on the Manhattan Project. All require many stages to achieve a substantial concentration of Uranium 235.

Dollarwise Thoughts on Atomic Energy

Costs mean little in war, but peacetime uses of U-235 and plutonium must pass the dollar test in competition with coal, fuel oil, natural gas, gasoline and electricity.

On the basis of energy costs only, "all other things being equal," the table on the last page of this section shows at what price per pound U-235 would give the same energy cost as conventional energy sources selling at the indicated prices. For such comparisons it is convenient to remember that one pound of U-235 is equal (energy-wise) to about 11,400,000 kilowatt-hours, also to 1500 tons of coal, or 200,000 gallons of gasoline.

Fuel engineers understand the limitations of such oversimplified comparisons. Others should be warned that "all other things" are never equal.

With this thought in mind, reconsider the uranium piles operated at Hanford to produce plutonium. These use U-235 in the cheapest form, say about \$1400 per lb., assuming purified normal uranium at \$10 per lb. (140 lb. of uranium contains one pound of U-235.)

If this were the whole story, coal would have to sell for a dollar a ton to break even with U-235 as a water heater. However, the pile using normal uranium must be immense to hold its own in a chain reaction. More important, the accumulating fission products "poison" the reaction after only a small part of the U-235 has been used up. Then the uranium cylinders must be removed for plutonium recovery. Finally, it has not yet been found possible to operate the normal-uranium

piles at high enough temperatures for practical power production.

If we go to the other extreme and build a small pile, using concentrated U-235, we shall run into excessive material costs, perhaps several times the \$52,000 per lb. set down in the table as the equivalent of 20-cent gasoline.

Something between the two extremes is likely to prove the most economical — perhaps a pile operating on a U-235 concentration between 1 and 10%.

The engineer of the "atomic-power age" must know the price of Uranium 235 in various concentrations and the characteristics of piles suited to them. No such information is yet available. He must also watch the danger from radio-activity; the requirements for radiation shields; explosion hazards, etc.

CONTINUED ON NEXT PAGE

WHAT TO EXPECT

Before discussion of possible and probable future applications of atomic energy to the arts of peace, the atomic bombs should have consideration. We may assume that these bombs contained from two to 200 lb. of either U-235 or plutonium, or both. No more precise information is available.

Details of the bomb design have been completely suppressed, but the following basic considerations are stated or implied in the Smyth Report:

The explosive in a bomb must be highly concentrated U-235 or plutonium. Since slow neutrons cannot produce a satisfactory explosion, the neutron retarder or *moderator*, is minimized. This, in turn, requires a U-235 mass so large that the escape of neutrons without hitting nuclei will not be excessive. For every 1000 atoms hit, the neutrons produced must split more than 1000 new atoms, so that the reaction will proceed rapidly in an expanding chain, as sketched below.

There can be little leeway in the size of the explosive charge. For a given shape there is a certain "critical" weight of material. If this is exceeded the bomb explodes instantly. If the weight of charge is less than the critical, it cannot be made to explode.

Therefore, the critical mass must be created at the moment of explosion.

The Smyth Report suggests that this can be accomplished by breaking down the charge into two or more well-separated parts, each having less than the

CLAIMS LIKE THESE ARE NOT JUSTIFIED

1. Pretty soon no more coal will be mined except as a raw material for chemical manufacture.
2. In a few years a tiny bit of uranium, built in at the factory, will drive your car for life through an engine no bigger than your fist.
3. All the big central stations will soon be running on atomic power.
4. Cheap atomic energy will enormously reduce the price of power.

critical mass. At the appointed moment these could be brought together within the bomb to create a supercritical mass, which would then explode automatically.

Peacetime Applications

Except possibly for superblasting operations, uncontrolled explosive reactions cannot be permitted in the peacetime use of atomic energy. This means that the quantity of U-235 assembled in any one spot must always be kept well below the critical weight to avoid spontaneous explosion.

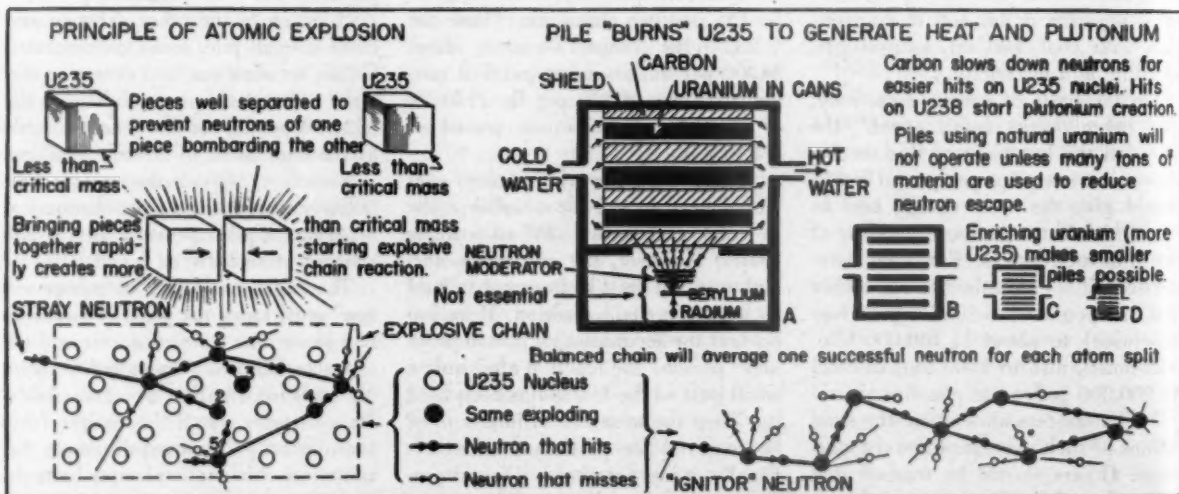
Depending on the particular application, the most desirable concentration of U-235 may range anywhere from the 0.7% in normal uranium up to 100%, with the probability that

many industrial applications will find the greatest economy in concentrations between 1% and 15%.

This matter of the degree of concentration of U-235 has received little public attention, yet nothing could be of greater practical importance. To make this point clear, consider the two extremes, 0.7% of U-235 and 100% of U-235, respectively.

The Hanford pile, using normal uranium (0.7% U-235) with carbon moderator, must be very large to work at all. It is inefficient in the sense that it must be shut down after a small part of the U-235 has been consumed. It cannot operate at high temperatures.

Its great advantage as a heat producer is the fact that its U-235 is bought at the lowest possible price. If



FROM ATOMIC ENERGY

...BUT REMEMBER THESE FACTS

1. The large-scale, controlled release of heat energy from U-235 has been fully demonstrated.
2. Beyond question, this energy could be applied directly for heating water and air, and making steam.
3. Such heat, in turn, could be applied directly, or converted into mechanical power or electricity by conventional steam turbines and gas turbines.
4. If and when U-235 in concentrations up to 10% costs less than \$25,000 per lb., it may find applications, but will compete, at first, with premium fuels rather than coal.

shown for the gas turbine would, of course, have to operate at temperatures up to 1200 F. There seems to be no basic reason why the pile itself could not be built inside the compressed-air receiver, discharging its heat directly to the compressed air.

With rather high concentration of U-235, this arrangement might be suitable for large airplane drive if excessive weight of radiation shields could be avoided.

Also, presumably, rockets and planes of the "buzzbomb" type could be powered by atomic heat delivered to the air of the jet steadily, not in puffs.

The sketches stress direct applica-

purified normal uranium sells for, say, \$10.00 per lb., the price of 140 lb. (containing one lb. of U-235) will be only \$1400. This would be a very favorable price if the pile could operate efficiently with the 0.7% U-235.

Concentrating the U-235 to 100% would permit a much more compact and convenient pile — perhaps little more than small pieces of U-235, encased in aluminum to ward off corrosion, and immersed in a tank of water; this should convert the water into steam at a regulated rate.

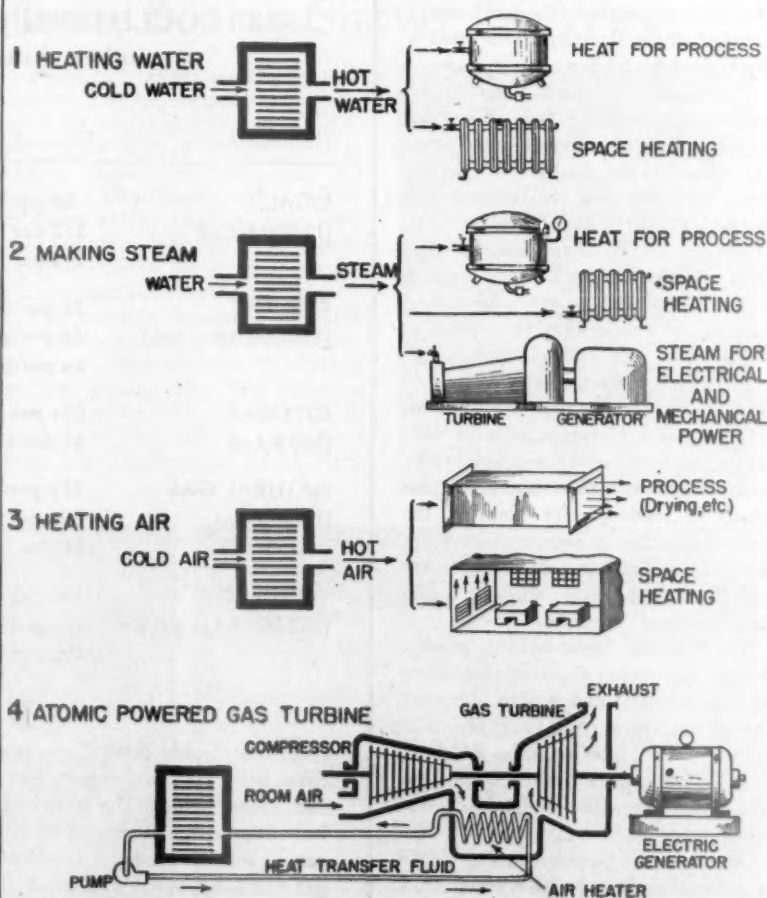
In large part, the control would be inherent. The water as a moderator would keep the chain going, but if the reaction got too violent, the resulting higher superheating of the steam would decrease the moderator effect and thereby hold the reaction in check. Yet even if all this comes true the cost of concentrated U-235 in the near future will be many times \$10,000 per lb.

Running up the concentration only a few percent above that in normal uranium may prove to be the way to get reasonable pile size and good efficiency without incurring exorbitant concentration costs.

When atomic energy is applied, the starting point is heat, picked up by water, air or a special heat-transfer fluid. Intermediate heat transfer fluids may be essential in certain applications (space heating and service water, for example) where people must be protected from injury by radioactivity.

The intermediate heat-transfer fluid

HOW ATOMIC ENERGY COULD BE APPLIED



Direct or indirect (as here) delivery of atomic pile's heat to air heater at temperature above 1000F could operate gas turbine.

THESE THINGS MIGHT RESTRICT USE OF ATOMIC ENERGY

1. Ineffectiveness of large piles using normal U-235 concentration
2. High cost of concentrated U-235 for smaller, more effective piles
3. Danger from radioactivity
4. Weight and cost of shielding against radiation
5. Explosion hazard
6. Possible short supply of uranium
7. Governmental restrictions on atomic-energy materials

tions of hot air, steam and hot water to process and space heating. This emphasis is justified by the often overlooked fact that such applications of heat have many times the total energy value of all the electricity generated in the United States for all purposes.

There has been much popular speculation regarding the type of engines required for atomic-power generation. The answer is simple. Present engines, steam turbines and gas turbines can be used with little or no change. This, of course, does not rule out the possible discovery of specialized engines for atomic power, or even direct production of electricity from atomic energy.

In the long run the implications of atomic power are staggering for both war and peace. However, popular writers on the subject have undoubtedly created unreasonable hopes in the minds of readers—for example, the expectation that in two or three years the Detroit builders will market cars with built-in "lifetime" slugs of U-235 and "fist-sized" engines.

Yet it seems fairly safe to predict that atomic energy will find some commercial applications within the next five or ten years, first, probably, as a premium fuel like aviation gasoline, worth a fancy price for specialized applications where low weight or some other characteristic is important.

As the cost of concentrating U-235 is reduced and application efficiencies improved, atomic energy may compete with cheaper fuels, perhaps ultimately with coal.

Important non-power applications of atomic energy may well include the ultra-high-temperature processing and fabricating of materials—also, modern "alchemy": building and rebuilding atoms to create new elements and to produce old elements at lower costs.

Radioactivity obtained directly or indirectly from artificial atom-splitting should find many important medical and industrial applications.

Turning back to ordinary power applications, we must avoid the temptation to overstress the economic importance of lower-cost power fuel. Fuel cost is only about 17% of the gross receipts of the electric utilities. Here's another way to put it: If, after allowing for transmission losses, one kilowatt-hour delivered to the consumer from modern plants represents a coal consumption of 1.5 lb., and if the coal costs \$5.00 per ton cancellation of the coal bill could not save more than $\frac{1}{3}$ of a cent per kilowatt-hour. And

atomic fuel will certainly not be free.

Performance of the atomic bomb is a monument to the scientists who unlocked the secrets of the atom and suggested the basic technique of making plutonium and concentrating U-235.

From there on, the job was at least 50% engineering. The various big plants of the Manhattan Project are vast assemblages of pipes, tanks, boilers, valves, instruments and controls, installed and operated by engineers, largely designed by engineers. From now on, the speed with which atomic power becomes practical will depend on the effectiveness of the engineer-scientist team.

It is possible, of course, that national controls may completely upset the entire technical and economic pattern of this discussion. For reasons of national security the government may decide to control or restrict atomic-power materials, plants and operations in ways not yet determined.

U-235 COULD COMPETE AT THESE PRICES

other things being equal

Common fuel	Assumed prices	Comparable prices for Uranium 235, dollars per pound (nearest thousand)
COAL (13,000 B.t.u.)	\$6 per ton	\$9,000
	\$12 per ton	\$18,000
	\$15 per ton	\$23,000
FUEL OIL (150,000 B.t.u. gal.)	2¢ per gal.	\$5,000
	4¢ per gal.	\$10,000
	8¢ per gal.	\$20,000
CITY GAS (500 B.t.u.)	50¢ per 1000 cu. ft.	\$39,000
	\$1 per 1000 cu. ft.	\$78,000
NATURAL GAS (1000 B.t.u.)	25¢ per 1000 cu. ft.	\$10,000
	50¢ per 1000 cu. ft.	\$20,000
	\$1 per 1000 cu. ft.	\$40,000
GASOLINE (150,000 B.t.u. gal.)	10¢ per gal.	\$26,000
	20¢ per gal.	\$52,000
	30¢ per gal.	\$78,000

BUT

Note that "other things" are never equal. U-235 in normal uranium form is by far the cheapest, but involves use of excessively large and inefficient "piles." The unit cost of the U-235 in enriched mixtures increases with the degree of enrichment. Over-all cost comparisons can be made only for a specified concentration of U-235 and for apparatus suitable for that particular concentration. Possible explosion danger and need to protect personnel against radiation are other important considerations.

PRODUCTION

On-the-Job Food

Neither management nor labor is likely to be willing to give up the in-plant feeding that boosted war efficiency.

When, in 1942, in-plant feeding of industrial workers was first introduced on a major scale in the United States (BW—Sep. 12 '42, p. 39), the program was designed primarily to improve wartime industrial morale—and efficiency—by protecting the workers' health. It was a wartime expedient.

Firmly Established—Now, however, with the war at an end, in-plant feeding is firmly established, and there is no likelihood that either workers or man-

agement will be willing to see on-the-job meals suspended and industry return to the days of the tin lunch pail.

At various times during the war, workers have demonstrated how they feel about in-plant feeding by a number of short-lived strikes to protest against suspension of feeding programs, or—in a flareup at the Briggs Manufacturing Co. plant in Detroit—over too many bean sandwiches and too little meat.

• For Peacetime Too—The implication is clear. Few union contracts now specify that feeding facilities must be furnished for workers, but plant employees—some 9,000,000 of whom were getting on-the-job meals (BW—Aug. 19 '44, p. 106) during the war—like the idea enough to take a militant stand for its continuation into the postwar period.

For a large segment of management,

the idea of permanent in-plant feeding will cause no concern. Of 101 plants surveyed in late 1944 by a private concern studying the future of in-plant feeding, 100 plants were found to be planning to continue making meals available for workers. All, however, were employers of 500 or more persons. Less unanimity can be expected among smaller concerns, where the mechanical problems are greater.

Aggravating the situation now is a reshuffling of workers in the transition from war. Those accustomed to hot meals at 35¢ to 50¢ a day may prove unwilling to go back to lunchboxes in plants which serve no meals. Thus, demands are expected for a spread of on-the-job feeding to mills and plants where the plan does not now exist. Federal enthusiasm for the plan is expected to spur this. Goal, of course, is to bring under the program as many as possible of the 6,000,000 industrial workers not now covered.

Now, practically all plants employing more than 2,500 workers have some

Meals on a Mass Basis; Boeing Shows the Way

The war put in-plant feeding on the map, and it provided one of the most convincing demonstrations of what can be accomplished by that system at the Boeing Aircraft plant in Seattle—a mammoth \$650,000 cafeteria (below).

Meals can be served at the rate of 50 a minute, and backstage kitchen equipment is geared to that fast pace. Prime examples are a whopping big mixer and chopping bowl (right) for preparing salads—part of every menu—and a specially built automatic pie maker (below, right), which turns out 350 an hour. A companion piece is a pie plate washer which scrubs 500 tins hourly.

There are steam-jacketed coffee urns of 150-gal. capacity which require an overhead crane to manipulate coffee bags; a battery of large electric ovens for roast; and 360 loaves of bread daily, and a galaxy of steam kettles ranging up to 100-gal. capacity. Piece-de-resistance in equipment is a 40 F chamber for chilling and deodorizing garbage.

The cafeteria has been operated by Industrial Food Crafts, Elizabeth, N. J., on a fixed fee basis. Meals start at 35¢, average 50¢. The company also operates 36 mobile units throughout the Boeing plant, and these are supplemented by 25 snack bars.





Under Manhattan

A NETWORK of steam pipes runs under many of the streets and avenues of New York carrying heat and power to hundreds of buildings. The owners and occupants depend on the central plant, for most of them have no heating systems of their own.

How vital it is that these central stations have accurate gauges to indicate or continuously record the pressure!

In the majority of steam plants, power houses and industries, in transportation in the air, on land, on and under the sea, Ashcroft Gauges serve their purpose with enduring accuracy.

If you are planning for manufacturing processes where air, steam, water or any gases or liquids are maintained under pressure, then your gauges should be Ashcroft.

For almost one hundred years this name has meant the finest in gauges.

Sourced and sold by leading distributors everywhere... When you order gauges, insist on ASHCROFT... Write for booklet.



ASHCROFT
Gauges

MANNING, MAXWELL & MOORE, INC.
BRIDGEPORT 2, CONNECTICUT

Makers of Ashcroft Gauges, Hancock Valves, Consolidated Safety and Relief Valves and 'American' Industrial Instruments. Builders of 'Shaw-Box' Cranes, 'Budgit' and 'Load Lifter' Hoists and other lifting specialties.

kind of feeding plan; 95% of all factories with more than 1,000 workers provide meal facilities; but only about 30% of plants with a labor force of less than 250 supply meals.

The War Food Administration in the past year alone has given technical assistance to businessmen in 1,430 industrial feeding projects.

• **Contract System Spreads**—Generally speaking, about half of all feeding systems are operated by management directly; the other half by contractors who guarantee to furnish meals of WFA nutritive standards at moderate prices. The latter form of operation has shown rapid increases in the past year, principally among small plants.

In Milwaukee, workers of 105 small plants get hot plate lunches through a single food supply company having a centrally located kitchen and commissary, from which food is delivered just before serving time.

Some 30% of all feeding systems are of the delivery-just-before-service type, mobile units serving scattered groups of employees or a number of small plants from a central kitchen. Another 20% comprises canteens and miscellaneous feeding units where sandwiches, box lunches, milk and hot or cold drinks may be purchased. The major group, 50%, is made up of permanent-construction cafeterias, with kitchens.

• **Supplies Scarce**—One of the principal drawbacks today is the food supply. Factory Stores, Cleveland company which does industrial feeding in Chicago, Youngstown, Pittsburgh, Birmingham, Detroit, Cleveland, and other industrial areas, and which serves plants employing approximately 250,000, recently said it was perplexed by inability to get meat, poultry, or fish necessary to turn out balanced meals. Getting food points was not involved; it was a matter of getting the supplies.

• **Britons Impressed**—U. S. achievements are sensational to foreign industrial feeding experts. Great Britain has had on-the-job feeding in progress for more than 75 years, and a British law makes compulsory the installation of feeding facilities in every plant employing more than 250 persons.

Recently a delegation of British industrial caterers spent one month touring U. S. plants to study feeding methods. The British caterers hoped to learn methods of improving postwar in-plant feeding back home. Before they left they admitted they had been fascinated by American rapid-fire, mass feeding—the record: 150 a minute at Bethlehem Steel in San Francisco. But, they added, they were stumped by the question of how they could use U. S. methods since the plants they service are almost entirely limited to 500 or fewer workers.

For Easy Lifting

Use of pallet system for freight on a national scale is sought by bureau. Standardized equipment will be pooled.

Palletizing—the mounting of packaged merchandise on platforms before shipment—was devised to save manpower in the work of loading and unloading. In wartime, the results were impressive.

For example, the Navy's use of 4x4-ft. wooden pallets enabled one woman with a fork lift truck to remove merchandise from storage and load a freight car in two hours. With old methods, the same job would have required the labor of 14 men for half a day.

• **On a National Scale**—Such demonstrations have inspired a project now being pushed by the Division of Simplified Practice in the Bureau of Standards, which would make skids and pallets the foundation for a new system of transportation and warehousing. The division (fathered by Herbert Hoover when he was Secretary of Commerce) is planning palletization of packaged freight on a national scale for the sake



MECHANICAL CREW

A Towmotor lift truck has been converted into a one-man maintenance crew at Boot Mills, Lawrence, Mass. Equipped with a scoop attachment, it carries a 600-lb. load of coal to bunkers, hauls ashes to trucks, even conveys wet concrete from mixer to forms (above) among its chores. One operator replaces a crew of three men formerly needed on each shift.

Which is worse...

a ~~\$10.00~~ mistake...

or a ~~\$100,000.00~~ mistake?

DON'T answer too quickly. A \$10.00 mistake made often enough may be as disastrous to a corner grocery as a single \$100,000 mistake to a large manufacturing plant.

Regardless of what mistakes may cost, the only wise course is to set up a system which constantly guards against them.

Valuable help in reducing the number of mistakes you make in your business is available for the asking. For whether mistakes result from inaccurate book-keeping, or a lack of vital facts and figures on which to base decisions, there is a National system that will cut

them to a minimum for any business large or small.

A fact-finding check up of your business!

We do not ask you to accept this statement without proof. At no obligation to you, a National representative will study your business and show you how to reduce mistakes in handling cash and keeping records—and how best to keep the essential facts about your business always at your fingertips.

Why not benefit by getting a clearer view of the facts on your business now? Call your National representative or write the National Cash Register Company, Dayton 9, Ohio.

National

CASH REGISTERS • ADDING MACHINES
ACCOUNTING-BOOKKEEPING MACHINES

THE NATIONAL CASH REGISTER COMPANY

forms • operating instructions
price lists • parts lists • catalogs
bulletins • instruction manuals
directories



with **VARI-TYPER***

Vari-Typed work looks printed

You can *dress up* paper work, which was formerly typewritten, by using the Vari-Typer Composing Machine and its hundreds of different styles and sizes of types. Your office typist uses appropriate Vari-Typer typography - **BOLD** types for headings - space-saving types for text - italics for emphasis. The result is work which looks like type-set printing, but costs far less. And it is done quickly, confidentially, in your own office, and can be reproduced on your duplicating machines, or by offset printing.

...requires fewer pages

Bulky, multiple page jobs, such as parts lists, manuals, directories, etc., require fewer pages when composed on Vari-Typer with its space-saving types and its variable spacings. As an example, a job consisting of 1000 copies of a typewritten 50-page manual requires 50 stencils and 50,000 sheets of paper. The same job done on Vari-Typer would take only 25 stencils, and 25,000 sheets of paper. A saving of 25 stencils and 50 reams of paper, as well as a 49% to 62% saving in time and manpower!

...cuts costs in half

Vari-Typer makes savings in supplies which amount to from 49% to 62%, and usually pay for the cost of Vari-Typer in a year - sometimes on a single job. Why not look into Vari-Typer for your company. A free folder - Vari-Typer, a new tool for business tells the story. Request a copy on the attached coupon.



TEXT COPY SET ON VARI-TYPER

Send me folder Vari-Typer, a new tool for business.

Name _____

Company _____

Address _____

City and State _____

RALPH C. COXHEAD CORP.
333 SIXTH AVENUE • NEW YORK 14, N.Y.

*REG. U.S. PAT. OFF.

Armor Styles Change

The accouterments of war have described a full circle in 400 years in at least one respect. At least two different types of body armor - analogous to the chain mail of the middle ages - were being tested in action by the Army when the Japs quit.

• One type consists of aluminum alloy plates with nylon padding secured in pockets attached to a nylon canvas vest. These vests were originally made with manganese steel plates, but aluminum alloy proved lighter and more flexible.

The other is made of a plastic known as Doron, which is made by combining a newly developed resin with glass cloth under pressure to form rigid plates, which are inserted in pockets in a vest as with the aluminum alloy.

• This 20th century armor was developed to guard foot soldiers against shell fragments, which caused about 80% of all wounds in the first World War, and a percentage almost as high in this war. It was also being tested by the flyers as protection against flak.

of the economies of mechanical handling.

Use of skids and pallets is an old story. Newer is the idea of standardizing the sizes to fit snugly into boxcars. Next step would be the pooling of the pallets and platforms, just as freight cars are pooled, so that dead-heading can be reduced or avoided. One idea is to get the railroads to supply them, charging a rental fee. Pallets are cheap (the average cost is perhaps \$2.50) so that rental would be nominal, particularly in relation to the time and money saved.

• **Types of Platforms**—In general, two kinds of platforms are used, the skid, which has four legs, usually steel, supporting a heavy wooden floor, and the pallet, which is a double floor separated with stringers to make a space for the forks of the lift truck.

An advantage claimed for the pallet over the skid is that several loads can be tiered one on top of the other, with the pallets serving to tie the stack together and distribute the load evenly, whether in boxcar or warehouse.

Skid platform sizes have already been the subject of one voluntary simplification project, but pallets now come in hundreds of sizes.

Experience has suggested standardiz-

g the pallets to hold multiples of standard-size shipping cases and also fit snugly into trucks and boxcars.

In the Grocery Field—A further application of this idea is planned by grocery wholesalers, who intend to adjust dimensions of aisles, bays, and column-heights of new warehouses for standard "palletized" storage, so as to conserve space and facilitate handling to the utmost.

Grocery products are regarded as particularly adaptable to containers designed to fit pallets that in turn will fit the boxcar. Accordingly, the first step by the Division of Simplified Practice is the development of a list of standard pallet sizes, which will be submitted for suggestions and subsequent approval by food packers and distributors.

Culls Pay Off

Unmarketable spuds are backbone of starch industry in Idaho. No longer a loss, they're rated a million dollars a year.

Until a few years ago, the principal distinction accorded cull potatoes in Idaho was that most of them were entered in red in the farmer's account book. Today these ugly ducklings of the Idaho potato family are the foundation of a business producing a million dollars of income annually.

Sired by Science—Chemurgy provided this agreeable transition from red to black by converting the rejected spuds into starch and siring a new industry in Idaho.

Since this use for culls was found in mid-1941, four starch factories have been built in the Snake River Valley of southern Idaho—at Twin Falls, Blackfoot, St. Anthony, and Menan—and these plants produce more than half the white potato starch used in the United States.

From Bits and Pieces—Engineers for the four companies refused to be stymied by wartime shortages of structural materials and machinery, or their inability to obtain priorities. They bought the steel from an abandoned bridge, converted old automobile transmissions into gear reduction units to operate the agitators for settling vats, rewound old motors for the potato washers and shaker tables, bought used spinners and drying equipment from an abandoned beet sugar factory.

With such bits and pieces they put together the four plants which since have processed 175,000 tons of waste potatoes into 22,000 tons of starch for



It happened in
STEAM TRAPS

When Carpenter made Stainless
EASY TO DRAW

For steam trap buckets that must withstand corrosion from all types of water found throughout the country and operate in temperature ranges up to 750°F., the need for *Stainless Steel* is self-evident.

But steam trap buckets must be deep-drawn—and not so many years back that wasn't an easy job with *Stainless*. Today, thanks to Carpenter's development of soft, ductile *Stainless Strip*, the steam trap bucket above was drawn to a cup depth of 3½" in three easy draws. Moreover die wear was cut, rejects were reduced and production increased.

Yes, it happened in steam traps and it can happen in your new

or redesigned products. The common denominator in obtaining best *Stainless* fabricating results is uniform, easy-working Carpenter *Stainless*. And by choosing Carpenter *Stainless* you get the extra advantages of high strength/weight ratio, corrosion, heat and wear resistance, special physicals and gleaming eye appeal.

Make use of the diversified *Stainless* experience of your nearby Carpenter representative to improve your products. He has helped hundreds of other manufacturers find the successful solution to their *Stainless* requirements. He can help you, too. Call him today or write us at the mill.

THE CARPENTER STEEL COMPANY, Reading, Pa.

Carpenter
STAINLESS STEELS



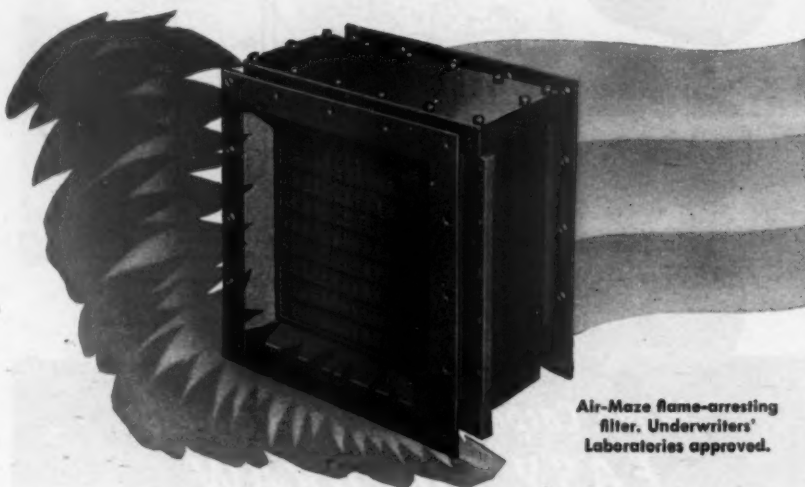
BRANCHES AT
Chicago, Cincinnati, Cleveland, Detroit, Hartford,
Indianapolis, New York, Philadelphia, Providence, St. Louis



WHEN ONE EXPLOSION CAN BREED ANOTHER...



THIS "SNUFFER" KEEPS FLAME FROM SPREADING



Air-Maze flame-arresting filter. Underwriters' Laboratories approved.

—another example of Air-Maze engineering

In mines, grain elevators, liquid storage holds of ships—perhaps in your own building or plant—one explosion may set off others like a string of firecrackers. Flames blasting through ventilators can start a dozen infernos in an instant.

Air-Maze engineers have now developed a flame and explosion arresting panel only 4 inches thick. This "snuffer" is open enough to permit air to pass through freely, yet it has the amazing ability to prevent an explosion on one side from igniting even an air-gasoline mixture on the other side.

This explosion-proof "by-product" of 20 years of specializing in air filtration is typical of the thousands of unusual developments pioneered by Air-Maze engineers. Whether your problem has to do with ventilation, humidity control, flame arresting, intake air filtration and silencing, or fine particle filtration of liquids—bring it to Air-Maze.

AIR-MAZE CORPORATION, Cleveland 5, Ohio. Representatives in Principal Cities. In Canada: Williams & Wilson, Ltd., Montreal, Quebec, Toronto, Windsor; Fleck Bros., Ltd., Vancouver, B. C.

IF IT USES AIR...USE
AIR-MAZE
ENGINEERED AIR FILTRATION



• Oil bath type filters and filter-enclosures • Cleanable filter panels for airborne dirt, oil, grease and liquids • Oil-washed type filters and filter-enclosures • Exhaust spark arrestors • Beer case, crankcase and tank vent breathers • Oil-separators for engine crankcases • Full-flow type cleanable oil filters.

the textile, paper, adhesive, and food industries.

• **Byproduct Sold**—Starch is extracted by a settling process after the culls have been cleaned, washed, ground, and dumped onto shaker screens that separate the starch milk from the pulp. The pulp is reground for a second pass through the screens, and after the second grinding and milk extraction, the pulp is sold for stock feed.

After the starch in the milk has settled to the bottom of the vats, the protein water is drained off and discarded and the starch deposit is washed and agitated with fresh water repeatedly until all impurities have been removed. Then it is dried, sifted, and bagged ready for shipment.

• **Capacity Doubled**—The plants were designed to produce ten tons of starch a day, but all have doubled their capacity. The only cloud on their horizon now is that the wartime shortage of potatoes has created demand for Idaho culls—for any kind of spuds—in the food markets and thereby menaced their raw material supply.

The chemurgic studies which led to construction of the starch plants were stimulated as a long-range aid to business by such firms as the Idaho Power Co. Other crops under investigation are caraway, digitalis, sage, fennel, and soybeans.

DDT PAINT TESTED

Experiments by major manufacturers have demonstrated the effectiveness of DDT-impregnated paint as a long-time insect repellent. Rooms in which such paint has been used have been found to remain completely free from flies and mosquitoes.

Laboratories reporting such successes to date include those of the Sherwin-Williams Co., E. I. du Pont de Nemours & Co., and Carbola Chemical Co.

Tests have been made in restaurants, hotels, and public buildings as well as homes. Interior wall paints, screen enamels, and porch paints have been used and found to be nontoxic.

Indications are that such finishes are also effective against cockroaches, moths, and most of the other insects that alight on the painted surface.

NEW VERSATILE PLASTIC

Kriston, a new nonflammable thermoset plastic, has been announced by B. F. Goodrich Chemical Co., Cleveland, as its first new postwar product.

Some applications for Kriston which have been suggested by Goodyear are in the optical industry, where its reported refractive index (about 1.57, higher than most optical glass) and

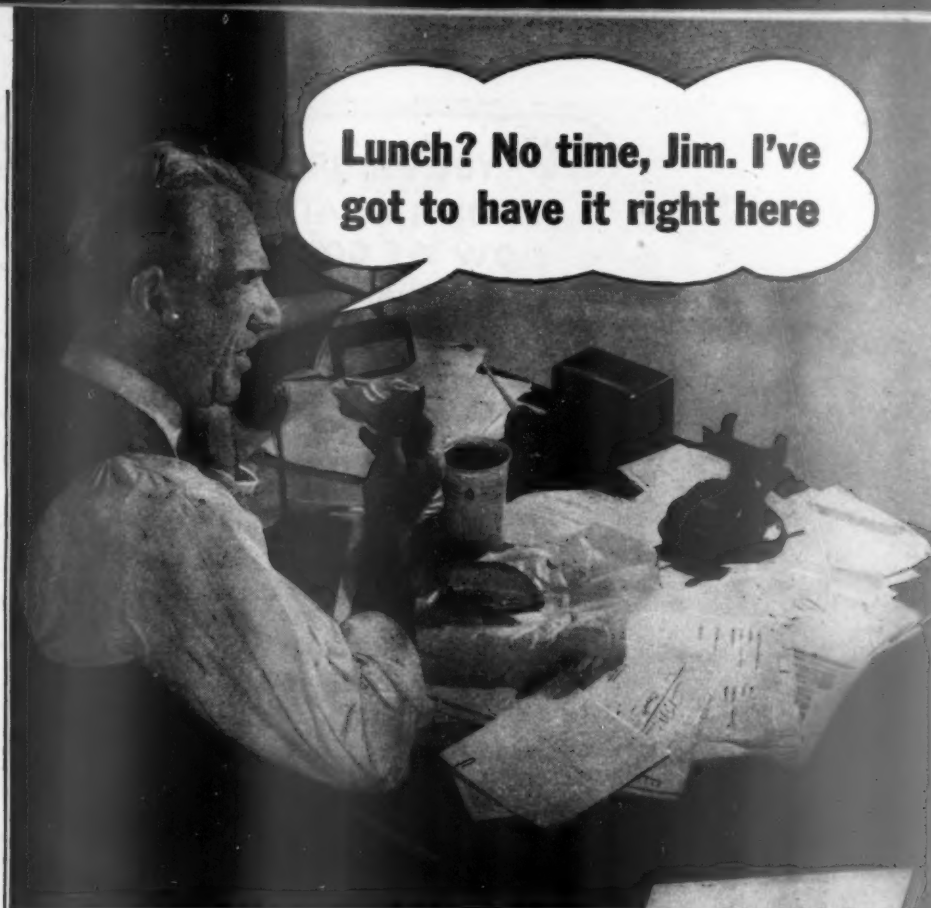
physical properties are said to make it suitable for lenses, prisms, or transparent sheets; the electrical industry where its dielectric strength and electrical resistivity suggest its use in insulators and other molded insulating materials; the chemical and processing industries where its claimed imperviousness to corrosive materials and solvents would make it valuable in fabricating parts for equipment; as a low pressure resin for paper, fabrics, and wood in mechanical services; and, finally, because it can be made water-clear or in a wide range of colors, in the fields of lamination and decoration.

The product, one of a series of new lamination resins, is formed by polymerizing liquid monomer in the presence of a suitable catalyst. Low temperatures and no pressure are required. Hammermill plans to offer the product in the liquid monomer state and does not plan to do any fabricating.



PORTABLE CARGO SCALE

sturdy enough to weigh quantities up to 5,000 pounds, yet light enough to travel by air, the 185-lb. cargo scale, designed by Howe Scale Co., Rutland, Vt., has special utility for pilots, who must know the exact weight of their cargo at all times. They can now carry their own equipment with them for use on landing fields remote from civilization, where instruments for accurate measurements are few and far between. The heat-treated aluminum mechanism may well have postwar application for highway trucks also.



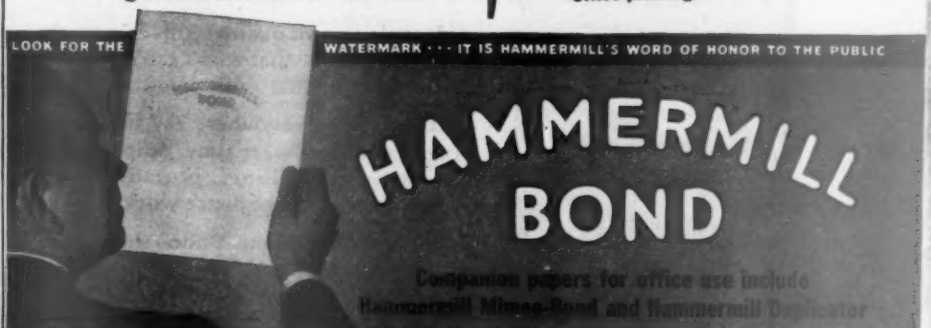
Tied to a "junk-heap desk"? Send for this free book...

Here is an idea-book published by Hammermill that has given thousands of businessmen a simple, workable "Recipe for an Orderly Desk." It will show you how the habit of "putting it in writing" will keep routine jobs moving and how this habit will help clear your desk and your mind for important work.

Every one of the suggestions in this book has been tested and proved in practice. Try them out. Send the coupon. No obligation. No salesman will call.

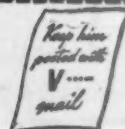


Hammermill Bond is a paper made for business use; depend upon it for your office printing.



Hammermill Paper Company
1455 East Lake Road, Erie, Pa.

Please send me—free—a copy of "Recipe for an Orderly Desk."



Name _____ Position _____

(Please write on, or attach to, your business letterhead)

BW 9-1



The PRINTING Calculator stops figuring errors!

Whether you figure ditches or any business problem, the Printing Calculator stops errors, proves answers are right.

It avoids mistakes and saves time by simultaneously *working, printing and proving* your problems—as shown by the simple figures on the tape.

It is the ONLY machine that:

- Divides automatically and prints**
- Multiplies and prints**
- Subtracts and prints**
- Adds and prints**

It replaces two ordinary machines: the adding machine that won't calculate, and the calculator that can't print.

Executives everywhere say the Printing Calculator *saves time, stops errors* in statistics, billing, prorating, and every other kind of figure work.

Save YOUR time. Phone the nearest Remington Rand office *now* or write to Buffalo 5, N. Y., for the free booklet TOPS.

Automatic
Printing CALCULATOR *Remington Rand*

NEW PRODUCT

Stiffness Gage

The resilient qualities of flexible materials up to $\frac{1}{4}$ -in. thickness, such as paper, cardboard, plastics, plastic laminates, light sheet metal, foil, and more, can be determined quickly and accurately.



Developed by the Taber V-5 Stiffness Gage, a new product of the Taber Instrument Corp., North Tonawanda, N. Y. The instrument comes in two models: one actuated by hand, the other by inbuilt electric motor (above).

Whatever the method of actuation, the operator cuts a $1\frac{1}{2} \times 2\frac{1}{2}$ -in. test specimen in a special shear that does the job in a single stroke, attaches the sample to the instrument by means of thumb screws, swings a pendulum, and reads the degree of bending on a dial. Not only does the device promise to evaluate normal stiffness and initial stiffness (which is frequently higher than normal) in terms of stiffness units from 0 to 5,000, but to permit the charting of elastic drift, or creep, of the test specimen. For measuring the flexural strength of very thin and flexible materials below ten units stiffness, an attachment is provided that is said to eliminate mechanical friction and inertia.

Fluorescent Tree Lights

New Fluorescent Christmas Tree Lights, developed by Sylvania Electric Products, Inc., Salem, Mass., will be ready for the 1945 holiday season. A

DUCT

of flexible
ness, such
plastic la
coil, and
ly and ac

ness Gage
Instrumen
V. Y. T
odels: on
by inbu

actuation
test spec
es the j
sample
of thum
and read
dial. Ne
to eval
il stiffne
than no
mits fro
e charti
the te
e flexu
ble mat
an attach
to elim
inertia.

as Tre
Electr
will be
son. Al

ough they are made with the same
es of fluorescent powders that go
o tubular lights for regular commer-
and residential use, they are as
and as a golf ball, and require no
sical auxiliary equipment for installa-
n and operation.

Like orthodox incandescent tree
ups, they have screw-type bases and
ne eight to a string in pastel shades
blue, green, yellow, and coral. Each
up is said to use only 5 w. of current,
have an approximate life of 1,000 hr.,
d to burn so cool that there will be a
imum drying effect on a tree.

Quality—Control Forms

Statistical quality control promises to
given added impetus and a new ease
installation and operation through the
velopment of the new Federal Chart
eets and Work Sheets for dimensional
ality control by the Federal Products
rp., 1144 Eddy St., Providence 1,
I. To explain their use, the corpo-
ion is also bringing out a comprehen-
e new Federal Dimensional Quality
ontrol Primer.

Object of the sheets and primer is to

THINGS TO COME

Neither bessemer converters,
openhearth, nor electric furnaces
will be required when it comes
time to make one, two, or more
steel castings for peacetime pro-
duction emergencies or mainte-
nance. A special type of thermit-
whose fiery reaction of iron oxide
and aluminum can be carried on in
a portable, refractory-lined, steel
crucible—produces a steel with a
tensile strength of 70,000 p.s.i.
which can be poured into appro-
priate molds after the manner of
furnace steel. Castings up to 400
lb. in weight have been so pro-
duced with complete success by
the Navy's far-flung maintenance
and construction units.

• When moving day comes for
the restaurant, food store, country
home, or other establishment
utilizing a walk-in refrigerator, the
chore of taking the massive equip-
ment out and setting it up in its
new postwar location promises to
be eased and expedited. Secret of
the new mobility is sectional
construction. The removable, in-
sulated top, bottom, sides, and
door of such a demountable re-
frigerator are calculated to make
it just as cold-tight as a standard
built-in job.



As seen and heard in a New England laboratory
by David Dietz, Science Editor of Scripps-Howard



In two minutes, a
blast like the crash of
a field gun will shake
this quiet laboratory.
The research scientist
you see here is carry-
ing out a test that
will save lives—one of the 37 ruth-
less steps by which modern engineer-
ing makes Plymouth Rope *provel* its
strength for vital jobs.

The Riehle tensile-strength testing
machine you observe is the only one
of its great size in the world. It is
powerful enough to snap a big rope
in two with a pulling force up to
120,000 pounds.

I watched this exciting test, min-
ute by minute, as the dial indicator
crept up, ton after ton, until the
fibers of this 7½ inch circumference

war-time sisal rope on the testing
machine crackled and snapped at
43,430 pounds—over 21 tons!

Plymouth Ropes of every type are
subjected to these breaking tests. A
Nylon rope of 9 inch circumference,
for instance, withstood a pull of
116,000 pounds—about the combined
weight of 55 popular-type motor cars!

This is one of the final steps taken
at Plymouth—largest rope-maker in
the world—to build ropes of greater
strength, longer life, more useful per-
formance. Precision methods of man-
ufacture and carefully selected ma-
terials are tested at each stage, from
the choice of raw fibers to the packing
of finished coils of Plymouth Rope—
for use in peace or war—at sea, on
farms and ranches, in factories and
in your own home.

Plymouth Cordage Company, Plymouth, Massachusetts.
District Offices: New York, Chicago, Houston, San Fran-
cisco. Warehouse Stocks: New York, Boston, Philadelphia,
Baltimore, Houston, Chicago, San Francisco.

In Canada: Cordage Distributors, Ltd.

PLYMOUTH

CORDAGE PRODUCTS

ROPE • TYING TWINE • BINDER TWINE • BALER TWINE

THE ROPE YOU CAN TRUST



SPLIT-DUCT MANIFOLDING



Buell's assurance of HIGH EFFICIENCY, LOW MAINTENANCE, LONG LIFE

SPLIT-DUCT MANIFOLDING used in Buell (van Tongeren) Multiple Cyclones ensures uniform distribution of both gas and dust to the cyclone collectors. This method is most important to final collection efficiency. Uneven distribution can cause local recirculation of gas, resulting in greater erosion rates in the cyclones receiving the higher concentrations and in the impairment of collection efficiency. With Split-Duct Manifolding, a Buell design feature, maximum collection efficiency is attained by this uniform distribution of the gas load.

The outlet can be installed to discharge the cleaned gases from *any side or end*, a flexibility of arrangement that cannot be obtained with unit chamber manifolding.

Buell Dust Recovery Systems are designed to do a job, not just to meet a "spec". A promise fulfilled by Buell's high efficiency, long life and low maintenance in hundreds of installations throughout American industry.



JUST OFF THE PRESS: Buell's new revised book—*"The Buell (van Tongeren) System of Industrial Dust Recovery"*—now in its fourth printing, is just off the press.

Write for your copy today.

BUELL ENGINEERING COMPANY, INC.
60 Wall Tower, New York 5, N. Y.
Sales Representatives in Principal Cities

DESIGNED TO DO A JOB, NOT JUST TO MEET A "SPEC"

BUELL FEATURES

SHAVE-OFF
LARGE DIAMETERS
EXTRA-STURDY CONSTRUCTION
CORRECT COPPER DESIGN
SPLIT-DUCT MANIFOLDS
WELDED WELDS BRIDGE JOINTS

RESULT IN

HIGH COLLECTION EFFICIENCY
LESS FAN BLADE WEAR
LOW DRAFT LOSS
LOW POWER CONSUMPTION
HIGH TEMPERATURE RESISTANCE
UNLIMITED CAPACITY
NO MOVING PARTS
FREE DUST FLOW

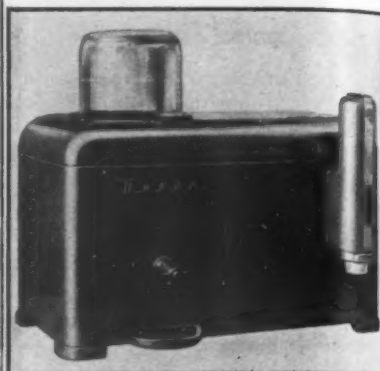
PRODUCE

HIGH EFFICIENCY
LOW MAINTENANCE
LOW OPERATING COST
LONG LIFE
NO CLOSING

enable a manufacturer to obtain dimensional data on work in progress both to chart the course of current production and to control quality before the product reaches final inspection and possible rejection. Both work and chart sheets are so designed that data can be readily gathered at each key operation and just as readily charted for immediate analysis.

Portable Water Cooler

Newest source of cold drinking water is the Norge Portable Water Cooler,



developed by the Norge Division, Borg-Warner Corp., Detroit 26. Since it measures only 22x13x12 in., it can be placed permanently on any convenient table adjacent to an electrical outlet or carried to temporary locations where water may be in demand. Powered by a 1/4-hp., hermetically sealed compressor unit, the cooler is designed to hold either a 1-gal. or a 5-gal. bottle of water, and can be filled from a pitcher. A dispenser for paper cups is attached to the front of the cabinet.

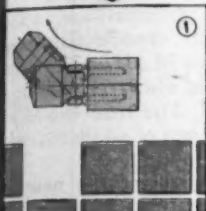
Insect Repellent

Limited quantities of Insect Repellent 6-12 (known to thousands of GIs in the armed forces as Formula 6-12) are being made available for the remainder of this year's fly and mosquito season by the Carbide & Carbon Chemicals Corp., 30 E. 42 St., New York 17. The chemical, which has a glycerin-like consistency and a mild aroma similar to that of witch hazel, is rated as six to seven times more effective in repelling disease-bearing and nuisance mosquitoes than 100% citronella.

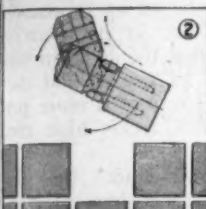
Just a few drops spread on the face, hands, and other exposed surfaces will repel flies, gnats, and fleas, as well as mosquitos, for several hours. Applied to the insides of trouser and sleeve cuffs, a little of the liquid, which is described chemically as 2-ethylhexanediol-1,3, is said to cause hitherto unrepelled chiggers to keep their distance.

New Baker ARTICULATED Fork Truck cuts aisle requirements

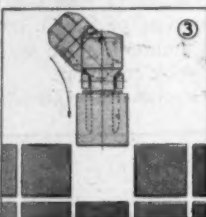
How the BAKER ARTICULATED FORK TRUCK saves time and space placing loads



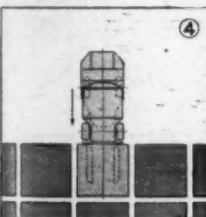
1. The driving section swings away from the load spot.



2. Both sections rotate about 25 degrees around turning center.



3. Truck articulates, lining load perpendicular to aisle.



4. Truck moves forward, spotting load in position.



A basically new design* involving a new method of steering by "articulating" the frame, permits swinging the load to line it up in position without lining up the truck itself. Thus this truck requires about two feet less space for placing loads at right angles to aisles. It needs less clearance on turns, and speeds carloading or any other handling operation where loads must be lined up or positioned in congested areas.

Specific advantages of this truck are:

1. Works in narrower aisles.
2. Turns in a smaller radius.
3. Spots loads quicker and easier.
4. Control units are more accessible.
5. Simpler Steering design cuts maintenance.
6. Permits mechanization of handling where hand trucks were necessary because of space limitations.

Field tests in both warehouse and production operation have proved the many advantages of this new truck. For complete specifications request Bulletin 1330.

*Licensed under Stevenson Patent No. 2,284,227.

Designed primarily for efficient warehouse operation



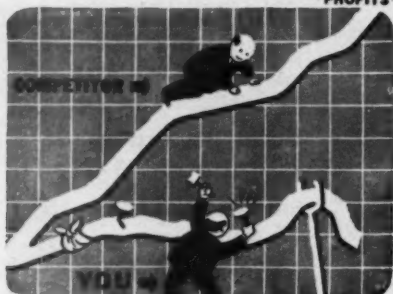
BAKER INDUSTRIAL TRUCK DIVISION of The Baker Raulang Company

2164 WEST 25th STREET • CLEVELAND, OHIO
In Canada: Railway and Power Engineering Corporation, Ltd.

Baker INDUSTRIAL TRUCKS

IF

your competitor's
PRODUCTION COSTS are
lower, for equal quality,
you will find it hard to
make a profit.



"CLEAN OIL"

will help you get costs down

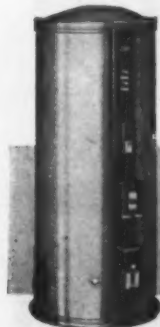
• **Honan-Crane Oil Purification Systems** in many leading plants have reduced cost of operations as much as 20%. The continuous removal of abrasives and contamination from industrial oils allows engines and machines to operate at all times on clean, fresh oil which greatly reduces excessive wear, increases production and safely extends the life of the oil.

No plant engineer or manager can afford to ignore the tremendous advantages gained by the use of Honan-Crane Oil Purification equipment.

HONAN-CRANE Oil Purification can be used on . . .

1. DIESEL Fuel and Lube Oils
2. TURBINE and HYDRO-ELECTRIC Generator Oils
3. Insulating Oils
4. Hydraulic Oils
5. Bearing Oils
6. Compressor Oils
7. Quenching Oils
8. Quartz Oils, etc.
9. OILS and COOLANTS used in grinding, honing, boring, cutting and like operations.

A request on your company letterhead will bring you complete information on the purification of any industrial oil.



HONAN-CRANE CORPORATION

Subsidiary of
Houdaille-Hershey Corp.
210 South Webster Ave.
LEBANON, INDIANA

FINANCE (THE MARKETS—PAGE 118)

Rail Merger Born

If C. & O. plan can clear all hurdles, result will be a new trunk line system ranking among first six in revenues.

The oft-rumored merger of the Chesapeake & Ohio railroad family into a new trunk line system (BW—Jun. 30 '45, p66) has at long last emerged from the dream stage.

• **Acquiescence Expected**—Thus far, the unification plan has only been approved by C.&O.'s directorate. But the C.&O.-dominated managements of the New York, Chicago & St. Louis (Nickel Plate) and the Pere Marquette had already been consulted, and the presidents of those roads were present last week when the C.&O. board announced its decision.

Similar acquiescence is expected from the directors of the Wheeling & Lake Erie. After the four boards have acted, approval of the stockholders of the roads will be necessary. In the case of the W.&L.E., assent of the trustee voting the 73% stock interest jointly owned by C.&O. and Nickel Plate will have to be obtained.

• **What It Would Mean**—The final hurdle will be approval by the Interstate Commerce Commission, which recently "legitimized" Alleghany Corp.'s working control of the roads concerned.

Once that is crossed, the result will be a rail system ranking among the first six in the country with respect to gross annual revenues, and among the first ten with respect to mileage operated.

The time required for all the necessary steps is problematical. Many believe, however, that unless strenuous opposition is encountered, the formalities can be disposed of in six to twelve months.

• **New Stock Issues**—The plan approved by the C.&O. directors and recommended to their stockholders would create a new class of \$100-par "prime" preferred stock, of which 645,000 shares would be issued. The road would also issue 670,000 shares of additional common stock.

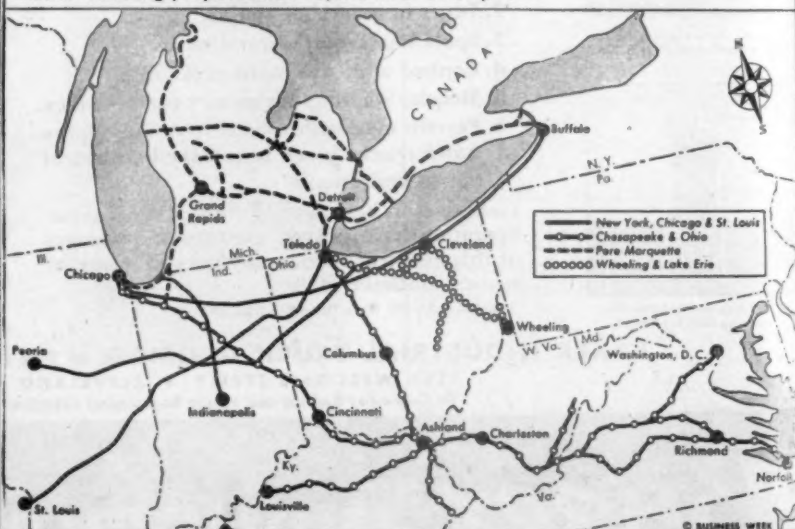
The dividend rate of the new preferred and the nature of its call provisions have not yet been determined. Nor has it been decided whether a sinking fund should be set up to insure eventual retirement. It has been decided, however, that the dividend would be higher than \$4 a year, and many believe that a 3½% rate is more probable, in view of C.&O.'s high credit standing.

• **Exchange Terms**—Under the plan, exchange terms, each share of Nickel Plate preferred (with accumulated dividend arrears of \$84) would be exchanged for one share of new C.&O. preferred plus ⅙ share of C.&O. common, while each common share would get ⅙ share of C.&O. common.

Pere Marquette has two preferred

C & O MARRIAGE ARRANGED

Robert R. Young proposes new 10,370-mile rail empire



HOW LONG

Will Capital Financing Enjoy the Present Alternatives?

This is unquestionably a favorable time for corporate financing. Rates are low, and active demand by investors offers various alternatives in preferred and common stocks or bonds.

But as reconversion progresses, changed conditions may affect the capital market. Among the new factors which could modify the present abundance and cheapness of money will be large-scale financing of consumer buying, bigger inventories, longer terms to wholesalers and retailers, costs of reconversion and modernization of plants, and final settlement of taxes and war contracts.

Does your business need additional capital with the ending of the war? This question can be answered only by an analysis of your prospective operations in peacetime production.

We are making many such studies. If you are a well established business and would like to benefit from our facilities and experience in determining the form of capital requirements, one of our partners will be glad to go into the matter with you.

KIDDER, PEABODY & CO.

FOUNDED 1865

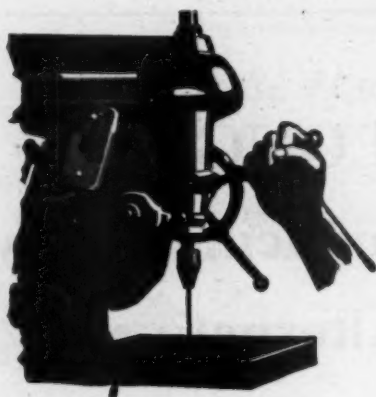
Members of the New York Stock and New York Curb Exchanges

NEW YORK

BOSTON

PHILADELPHIA

CHICAGO



DIVERSIFIED CLEVELAND Takes Re-conversion in Stride

AS WAR CONTRACTS TERMINATE, Cleveland's industries shift smoothly to peacetime products. More than 80 per cent of its plants require little or no changes in the transition.

Widely diversified industry here produces the goods and materials for war or peace, on the same equipment, with the same skilled manpower. Postwar planners will find Cleveland ready to manufacture products, assemblies and parts for their postwar needs.

Cleveland has many advantages for the location of your plant. Stabilized employment, abundant raw and fabricated materials, low-cost power, excellent transportation—with 71 per cent of the nation's buying public less than 500 miles away.

Businesses of every type are urged to call upon The National City Bank for helpful information and assistance on the relocation of either plants or offices.

CLEVELAND—"Halfway to Everywhere"



THE NATIONAL CITY BANK OF CLEVELAND



1845—ONE HUNDREDTH YEAR—1945

Member Federal Deposit Insurance Corporation

issues outstanding. For each prior preference share with \$36.35 of dividends in arrears, the plan offers one share of preferred and $\frac{1}{2}$ of common; for each preferred share (with \$70 of dividends in arrears), $\frac{1}{2}$ share preferred and $\frac{1}{2}$ share common. One share of C.&O. common would be given for each two shares of Pere Marquette common.

Wheeling & Lake Erie preferred would be exchanged on a share-for-share basis for C.&O. preferred; each share of common would get $1\frac{1}{4}$ shares of C.&O. common. Of the 116,093 outstanding shares of Wheeling & Lake Erie prior preferred, 115,369 are now owned outright by C.&O., and no provision was made in the plan for the other 724.

• **Caught Off Balance**—Announcement of the merger plan, engineered by Robert R. Young, came so unexpectedly that Wall Street traders were caught a bit off balance. They quickly figured that the new C.&O. common should not be expected to sell above the \$50 price around which the present shares had hovered in recent weeks. On that basis, they found that they had been far too optimistic in bidding up Nickel Plate common earlier this year to above \$75 and Pere Marquette common to above \$43.

So, despite the "peace selling" that had already dropped Nickel Plate common to the neighborhood of \$54 and Pere Marquette common to around \$29, traders promptly dropped them a few points lower. Since this seeking of "merger levels," the stocks have shown relatively little variation.

• **A Different Story**—The reverse proved true, however, in the case of the preferred stocks of the same two roads. Figuring that a new issue of $3\frac{1}{2}\%$ C.&O. preferred should command a price of around par, or \$100 a share, and that a new issue with a 4% rate could be expected to sell at around \$110, traders quickly saw that, if the merger went through, the Nickel Plate and Pere Marquette preferred issues would definitely be worth more than their market value at the time the news was received.

Consequently, such issues have become attractive buys, and they are now being traded at prices of as much as \$6 above their pre-merger-news levels.

• **Wide of the Mark**—Even at that, however, traders were way off base in their earlier guesses as to the possible merger-value of the stocks. Not so many weeks ago Nickel Plate preferred, for example, was actually selling at \$148 a share, compared with its present level of \$126, and the two Pere Marquette preferreds at \$117 and \$116 against their present market valuations of only \$108 and \$92.

As Wall Streeters see it, the consoli-

WAR CONTRACT CANCELLATIONS

Cutbacks of war contracts came so fast when Japan surrendered that no complete list exists anywhere. Not even the armed services have taken the time to compile exact data on the flood of cancellations. It may have to be left to the historians to produce an exact figure.

• **SEC's List Incomplete**—Most dramatic evidence of how the cutbacks have hit business, however, is provided by the tabulation released by the Securities & Exchange Commission (below).

But not even this list is complete by billions upon billions of dollars, as SEC regulations requiring the reporting of war contract cutbacks

apply only to companies having publicly listed securities and when a contract termination amounts to 20% or more of their total sales of the previous year. Such companies must send a report on the cutback to SEC by special delivery mail not later than midnight of the day upon which effective notice of the cutback is received.

• **Deferred Reports**—In addition, when the value of two or more contracts terminated total 25% or more of the previous year's total sales, concerns with publicly listed stocks are required to report, but not until the close of the fiscal quarter nearest the cancellation. Such reports are begin-

ning only now to reach SEC in volume. More than 320 were received by SEC last week, and will be publicized later.

SEC's requirement for reports on contract cutbacks was not designed to give the country a complete statement of terminations. The purpose was to keep investors constantly in touch with any significant change in their company's war business, and to prevent any repetition of the Elastic Stop Nut case of last winter (BW—Dec.16'44,p.72). The decision to require such reports was made by SEC only after consultation with business spokesmen over a period of months (BW—Apr.28'45,p.72).

Company	Contract Cancellations	1944 Net Sales*
	(Figures in Millions of Dollars—000,000 Omitted)	(Figures in Millions of Dollars—000,000 Omitted)
Boeing Aircraft Co.....	\$930.0	\$608.1
United Aircraft Products, Inc.....	833.0	743.5
Wright Aeronautical Corp.....	805.0	778.2
Chrysler Corp.....	652.0	1,098.1
Curtiss Wright Corp.....	616.0	1,716.9
Douglas Aircraft Co.....	525.0	1,061.4
Glenn L. Martin Co.....	413.3	533.4
Packard Motor Car Co.....	400.0	455.1
Bell Aircraft Corp.....	252.0	317.5
Republic Aviation Corp.....	242.0	369.6
Grumman Aircraft Engineering Corp.	240.0	305.1
Lockheed Aircraft Corp.....	191.3	602.5
North American Aviation, Inc.....	147.9	684.0
Pressed Steel Car Co., Inc.....	113.3	28.6
Newport News Shipbuilding & Drydock Co.....	95.4	146.0
Food Machinery Corp.....	93.0	180.0
Diamond T Motor Car Co.....	88.7	93.7
N. Y. Shipbuilding Corp.....	77.0	172.9
Caterpillar Tractor Co.....	64.6	245.9
Northrop Aircraft, Inc.....	62.4	88.0
Wheeling Steel Corp.....	53.9	135.1
Zenith Radio Corp.....	46.4	61.3
Sylvania Electric Products, Inc.....	42.5	101.5
Servel, Inc.....	41.4	58.0
Fruehauf Trailer Co.....	27.1	68.9
International Tel. & Tel.....	25.9	51.7
Savage Arms Corp.....	25.6	37.5
Aviation Corp.....	24.7	61.3
Beech Aircraft Corp.....	23.5	107.3
Richfield Oil Corp.....	21.1	78.4
Federal Motor Truck Co.....	20.0	33.9
American Woolen Co., Inc.....	20.0	183.0
Casco Products Corp.....	18.4	10.5
American Bosch Corp.....	15.3	61.2
Hayes Industries, Inc.....	15.1	36.0
Autocar Car Co.....	14.8	59.9
Cessna Aircraft Co.....	14.3	40.4
Fairchild Camera & Instrument Corp.	14.0	41.7
R. G. Le Tourneau, Inc.....	13.8	42.2
Waco Aircraft Co.....	13.0	12.0
General Time Instruments Corp.....	12.9	24.6
Farnsworth Television & Radio Corp.	12.5	33.9

Company	Contract Cancellations	1944 Net Sales*
	(Figures in Millions of Dollars—000,000 Omitted)	(Figures in Millions of Dollars—000,000 Omitted)
Royal Typewriter Co., Inc.....	12.0	18.8
Lima Locomotive Works, Inc.....	12.0	51.8
Midwest Piping & Supply Co.....	11.7	19.4
Mullins Mfg. Corp.....	9.8	40.6
Menasco Mfg. Co.....	9.7	16.6
Air-Way Electrical Appliance Corp..	9.6	2.3
American Type Founders Sales Corp.	9.1	48.2
Magnavox Co.....	8.5	14.7
Murray Ohio Mfg. Co.....	8.3	9.9
Apex Electrical Mfg. Co.....	8.0	13.5
Emerson Radio & Phonograph Corp..	7.6	23.0
Iron Firearm Mfg. Co.....	7.5	18.7
General Precision Equipment Corp..	7.0	24.1
General Bronze Corp.....	7.0	19.4
American Central Mfg. Corp.....	5.8	30.9
U. S. Hoffman Machinery Corp.....	5.7	20.4
Ferro Enamel Corp.....	5.7	9.9
Admiral Corp.....	5.3	42.1
White Sewing Machine Co.....	5.1	7.1
National Gypsum Co., Inc.....	4.7	24.2
American Coach & Body Co.....	4.6	5.6
National Can Corp.....	4.6	12.1
Woodall Industries, Inc.....	4.5	22.5
Parker-Wolverine Co.....	4.3	6.7
Hupp Motor Car Co.....	3.7	9.7
Hewitt Rubber Corp.....	3.7	15.8
Piper Aircraft Corp.....	3.7	10.6
Sullivan Machinery Corp.....	3.0	12.7
Central Foundry Co.....	2.9	3.7
Allied Products Corp.....	2.8	11.2
Nineteen Hundred Corp.....	2.7	10.0
Herman Nelson Corp.....	2.5	4.2
Checker Cab Mfg. Corp.....	2.4	6.8
Eureka Vacuum Cleaner Co.....	2.0	9.2
Lionel Corp.....	1.7	8.0
National Pressure Cooker Co.....	1.5	7.9
Goldfield Consolidated Mines Co....	1.3	3.1
Sidney Blumenthal & Co., Inc.....	1.2	19.3†
Sonotone Corp.....	1.2	9.3
Irving Air Chute Co.....	1.1	8.4
ACF-Brill Motors Co.....	1.1	28.9
Chicago Electric Mfg. Co.....	0.9	2.7

* Calendar year, or fiscal year ended during 1944.

† Calendar year 1942, later years not available.



Three Of A Kind

When you can sell three as easily as one, do it! Increasing the unit of sale will be more important than ever in the days ahead. And packaging can play an important part in this phase of your merchandising plan. Instead of selling your products in single units, group several units together and package them in an attractive H & D Salespak. Then watch sales boom.



Post-War Packaging Idea—SALESPAK

H & D Salespaks invariably increase units of sale. Ask yourself—"Can we group together several of our products and sell them as a unit in a Salespak?" For complete information on Salespak, write for H & D's booklet, "How to SELL with Corrugated Boxes."

Hinde & Dauch
AUTHORITY ON PACKAGING

The HINDE & DAUCH Paper Co., 4561 Decatur Street, Sandusky, Ohio

Factories in Baltimore • Boston • Buffalo • Chicago • Cleveland • Detroit • Gloucester, N. J.
Hoboken • Kansas City • Lenoir, N. C. • Montreal • Richmond • St. Louis • Sandusky, Ohio • Toronto



RECONVERTER RECONVERTED

Soon to be back at his old stamping ground, Arthur H. Bunker, formerly deputy executive vice-chairman of WPB, is joining the staff of Lehman Brothers, New York, as partner. Before he started on his war career, he was executive vice-president of the firm of Lehman Corp. He went to Washington to head the old Office of Production Management's aluminum and magnesium unit, moved on to become vice-chairman of the Production Executive Committee, which handled WPB's part in reconversion.

dation will produce far more stable results than either the Nickel Plate or Pere Marquette could ever hope to obtain by themselves. Consequently, they believe that C.&O. will have little trouble in getting the necessary consent from stockholders of those roads.

• **Source of Dissent?**—Many Wall Streeters are less certain, however, about the voting reaction of the holders of C.&O. stock. The new combination, obviously, would result in wider fluctuations in future C.&O. earnings than have characterized that road's operations in the past. In case the stockholders show marked aversion to the plan, a goodly number of votes could be mobilized against it, since only 7.9% of C.&O. stock is now owned by the Allegheny Corp.

One factor that might help to put C.&O. stockholders behind the plan is the estimate that in 1944 consolidated earnings of the new system would have run around \$4.43 a share on the in-

WHAT NEXT...

WILL THEY DO WITH THESE

FIBERS OF GLASS?



LIFE JACKETS packed with glass! Yes, microscopically fine fibers of *Fiberglas*® offer many new advantages in this vital marine life-saving equipment. These resilient *Superfine Fibers* are packed to form millions of entrapped air spaces within the jacket, giving it buoyancy. Being glass, the fibers will not rot or burn; they resist fungus growths; retain their buoyant property in spite of repeated immersions and dryings. These newest fibers also are being used in thermal and acoustical insulating blankets in aircraft.



100-OCTANE GASOLINE pours from this great, modern refinery where *Fiberglas* is helping to maintain high production efficiency. High-temperature process lines are covered with *Fiberglas Pipe Insulation*; chemical processing vessels are insulated with *Fiberglas Metal Mesh Blankets*. Besides its high thermal insulating efficiency and light weight, *Fiberglas* offers permanency and stability, because it is an inorganic material.



INTRICATE PARTS, like this aircraft duct, are now being formed, in one piece, of *Fiberglas*-reinforced plastics *without costly dies and fixtures*. The use of *Fiberglas Cloth* with the new contact and low-pressure resins, provides a new material which combines great strength with extremely light weight—offers significant time- and cost-saving possibilities in the fabrication, assembly and installation of formed parts.



PORTABLE REPAIR SHOPS—for transportation by air to remote points—are insulated with *Fiberglas Thermal Insulation* to help maintain the control of temperature and humidity required for repairing precision instruments. This same efficient insulation—light-weight, moisture-resistant, firesafe glass fibers—is saving fuel, providing year-round comfort in homes and buildings where U. S. Gypsum's "Red Top" (*Fiberglas*) Insulation has been installed.

These are but a few typical examples of the ingenuity of designers and engineers in using *Fiberglas* in one or more of its many forms, to improve products or speed production. Perhaps it can do a better job for you, too. For further information about *Fiberglas*—or samples for experimental purposes—write Owens-Corning *Fiberglas* Corporation, 1803 Nicholas Bldg., Toledo 1, Ohio.

In Canada, *Fiberglas* Canada Ltd., Oshawa, Ontario

FIBERGLAS

*T. M. Reg. U. S. Pat. Off.



*Washington — The State — Has Everything!

Unrivalled supplies of electric power . . . plus co-operation among distributors of power . . . gives industries in the State of Washington cheap electricity in abundance. Through the Northwest Power Pool (composed of the principal private, municipal and federal electric systems, all interconnected) industries in every part of the State have access to the power they need. Great electro-chemical and electrometallurgical industries are already operating . . . aluminum, magnesium, special steel alloys, calcium carbide, and wood-products and smelting plants, all requiring large amounts of power. Potentially this area can produce more and cheaper hydroelectric power than any other region of the United States. The Northwest Power Pool, tested and proved in every wartime emergency, can also serve other industries taking advantage of the resources and markets offered by the State of Washington.

NORTHWESTERN ELECTRIC COMPANY • THE WASHINGTON WATER POWER COMPANY
PACIFIC POWER & LIGHT COMPANY • PUGET SOUND POWER & LIGHT COMPANY

Business-Managed Electric Companies, Serving Low Cost Electricity to More Than 370,000 Homes, Farms, Businesses and Industries in the State of Washington

WASHINGTON
The New Cornerstone

ABUNDANT, CHEAP, HYDROELECTRIC POWER FOR INDUSTRY—vast, interconnected hydroelectric systems.

IMMENSE SOURCES OF RAW MATERIALS—minerals, timber, fuels, water power, etc.

NUMEROUS BASIC INDUSTRIES—provide materials for processing.

SKILLED LABOR—intelligent, responsible, fair in its dealings with management.

DIVERSIFIED AGRICULTURAL PRODUCTION—fruits, grains, livestock, vegetables, dairy products.

PLEASANT LIVING—a temperate, healthful climate ideal for both working and living.

LOW TAXES AND CONSERVATIVE FISCAL POLICIES—definite, statutory limit on property taxes . . . no state income tax . . . general obligation debt.

UNEXCELLED TRANSPORTATION FACILITIES—by land, sea and air . . . in all directions . . . deep-water harbors.

GATEWAY TO THE GREAT POSTWAR PACIFIC MARKETS—the Orient, Alaska, Russia, Canada, South America.

INDUSTRIAL SITES AND HARBOR FACILITIES—abundant industrial building sites on harbors, tracks and highways; available dock, terminal and warehouse facilities, anchorages, etc.

Increased amount of common stock that could have been outstanding, compared with the \$3.57 a share which C.&O. actually reported. Likewise inviting estimates that combined net this year would run around \$4.65 a share as against \$3.25 a share by C.&O. alone.

V-Loan in October

Sales to individuals again to be emphasized. Limitation may be placed on subscriptions by insurance firms and banks.

Wall Street's government bond crowd wasn't far afield in its guesses (BW—Aug. 25 '45, p. 74) concerning specifications of the Treasury's new Victory Loan.

\$11,000,000,000 Goal—The Treasury's final drive for funds to meet war expenses has now been scheduled to get under way on October 29 with an announced goal of \$11,000,000,000.

Despite the many early rumors to the contrary, the V-Loan "basket" of security offerings represents substantially the same group of issues sold publicly during the previous campaign. Again included are the familiar E, F, and G savings bonds; Series C savings notes; 4% bonds due in 1972 and first callable in 1967; 2½s maturing 1962 and callable in 1959; and the ½% certificates of indebtedness due Dec. 1, 1946. Only offering omitted will be the seventh loan drive's medium-term 1½s.

Emphasis Unchanged—As in all former war loan campaigns, the major emphasis of the Victory Loan drive will be on sales to individuals. In the new bond drive they will be asked to invest at least \$4,000,000,000 in the new securities, including \$2,000,000,000 in the E savings bonds alone.

The new quotas are substantially lower than the \$7,000,000,000 and \$4,000,000,000 targets set up for individuals to shoot at in the "Mighty Seventh" drive.

The over-all quota is generally expected to be attained as a matter of course, but some nonofficial quarters consider the E bond goal pretty steep now that the shooting has ended.

New Limitations—The "ground rules" thus far laid down to govern the campaign are identical with those prescribed for the "Mighty Seventh."

Whether these regulations will be imposed as much as in earlier drives remains to be seen. Some changes in rules may be made. For example, subscriptions by insurance companies and savings banks are likely to be made subject to some limitations.

Common Stocks in War and Peace

In its early years, the 1939-45 wartime stock market proved no paradise for investor or trader. Recurring Axis gains soon chilled the speculative ardor ignited by Hitler's invasion of Poland and finally sent many stocks to new eight-year lows. Only when the tide of battle began to turn in 1942 was the market willing to rise and not until eventual victory was assured was it able to produce

any second World War counterparts of 1915-16's war baby crop. Consequently many consider the spread of "peace-is-bullish" sentiment far more responsible for the 1942-45 bull market than speculative hopes that war would inflate corporate earnings and dividends. The early favorable impact on the market of the recent cessation of hostilities has further confirmed their opinion.

	The Wartime Price Performance				Ten Days After Peace
	Open	High (date)	Low (date)	Close	
Industrial Shares					
Allied Stores	\$7.00	\$31.00('45)	\$4.00('42)	\$30.00	\$30.50
Allis Chalmers	29.75	49.75('45)	21.75('40)	47.75	49.50
American Can	94.00	116.50('40)	55.25('41)	97.00	100.50
American Car & Foundry	17.50	55.37('45)	18.00('40)	54.00	56.00
American-Hawaiian S.S.	13.50	50.50('40)	23.00('40)	40.50	41.00
American Sugar Refining	17.00	56.87('45)	12.75('40)	45.50	45.00
American Tobacco "B"	76.25	91.75('40)	34.87('42)	79.00	83.67
American Woolen	4.62	29.25('45)	3.50('42)	19.75	19.75
Anaconda Copper	22.87	40.00('39)	18.00('40)	32.00	33.25
Armour & Co.	3.62	10.25('45)	2.25('41)	9.00	9.00
Bethlehem Steel	54.50	100.00('39)	49.50('42)	77.50	80.00
Chrysler Corp.	72.12	117.75('45)	41.62('41)	112.00	122.00
Consolidation Coal	2.12	26.62('45)	2.12('40)	21.00	21.00
Douglas Aircraft	58.50	95.75('45)	44.00('43)	82.25	84.00
E. I. du Pont	154.75	188.50('39)	102.75('42)	164.00	170.00
Endicott Johnson	32.50	71.50('45)	35.00('40)	72.25	72.62
General Electric	32.12	44.50('45)	21.50('42)	44.00	46.00
General Foods	40.25	49.37('40)	23.50('42)	45.00	45.50
General Motors	41.50	70.50('45)	28.62('41)	67.75	70.12
B. F. Goodrich	16.25	63.50('45)	10.00('40)	59.75	63.00
Graham Paige	50	12.00('45)	.50('40)	10.75	11.87
Int'l Harvester	45.87	90.87('45)	38.00('40)	85.12	87.00
Johns-Manville	59.00	128.00('45)	44.00('40)	124.00	128.00
Lehigh Coal & Navigation	1.75	16.25('45)	1.50('40)	13.50	13.00
National Dairy Products	14.37	32.75('45)	11.87('40)	29.75	30.75
National Distillers	20.12	44.75('45)	17.00('40)	41.12	42.12
Pacific Mills	11.50	54.50('45)	8.00('40)	53.75	54.00
Paramount Pictures	6.75	34.50('45)	4.25('40)	31.87	34.00
Radio Corp.	5.00	13.87('45)	2.25('41)	13.75	15.50
Sears Roebuck	72.50	122.50('45)	43.50('42)	120.75	129.50
Standard Oil (N. J.)	39.00	66.12('45)	29.87('40)	59.25	60.25
Studebaker	6.50	29.50('45)	3.37('41)	25.87	28.50
Swift & Co.	17.12	34.87('45)	17.62('40)	32.62	33.62
Texas Co.	34.50	55.00('45)	30.00('42)	50.62	50.62
TWA	8.75	54.25('45)	8.37('42)	46.50	47.75
Union Carbide	73.50	94.25('39)	58.00('42)	90.00	91.50
United Aircraft	32.00	53.37('40)	23.87('42)	25.75	26.62
United Fruit	72.50	106.75('45)	48.50('42)	105.75	104.75
U. S. Rubber	35.12	61.75('45)	13.50('41)	59.25	63.25
U. S. Steel	43.25	72.75('45)	42.00('40)	67.62	69.00
Westinghouse	*23.87	37.87('45)	*15.75('42)	34.25	35.00
Railroad Shares					
Atch. Topeka & Santa Fe	21.00	101.00('45)	13.00('40)	87.12	88.00
Atlantic Coast Line	15.00	79.50('45)	9.62('40)	64.50	64.00
Baltimore & Ohio	3.87	28.87('45)	2.12('41)	19.62	19.75
Chesapeake & Ohio	29.50	54.87('45)	27.50('42)	50.87	49.75
Great Northern Pfd.**	19.25	55.75('45)	15.25('40)	49.00	49.62
Illinois Central	9.25	42.25('45)	4.25('41)	32.25	31.87
Louisville & Nashville	*21.37	60.00('45)	*19.00('40)	55.00	57.00
Missouri-Kansas-Texas	1.00	16.75('45)	.25('40)	13.50	12.75
New York Central	11.12	32.25('45)	6.62('42)	24.75	25.00
N. Y., Chicago & St. Louis	11.87	75.25('45)	8.87('40)	55.75	51.62
Northern Pacific	7.12	35.62('45)	3.75('40)	26.50	26.12
Pennsylvania	15.00	40.50('45)	15.00('40)	35.25	35.75
Southern Pacific	10.50	57.75('45)	6.75('40)	45.25	45.50
Southern Ry.	12.37	52.50('45)	8.00('40)	42.37	45.00
Union Pacific	91.00	136.00('45)	57.50('41)	125.25	126.00

* Adjusted for subsequent split-up of stock.

† Bid.

** Only preferred stock outstanding.

MARKETING

FM Fog Cleared by FCC

Communications commission gives U. S. manufacturers and broadcasters first outline of coming regulations. Abandons plan to reserve 20 channels, allots ten more to northeast section of U. S.

To give FM transmitter and receiving set manufacturers an immediate guide for their operations, the Federal Communications Commission has issued a "prospectus" of its forthcoming regulations that will govern this method of radio broadcasting.

- **Assign Reserved Bands**—Reversing its earlier proposal to hold 20 FM channels in reserve for future assignment, the commission will utilize all 70 channels in the new commercial FM band (92-106 megacycles) and add ten more channels (106-108 mc.) to the thickly populated northeastern part of the country.

At the same time the commission disclosed that the country will be divided into two segments: Area I covering the northeastern portion, and Area II the remainder. Sixty commercial FM channels have been earmarked for metropolitan stations and 20 for community stations in Area I. No rural stations will be licensed in Area I.

- **Power Controlled**—Under the new setup, contained in a summary of rules and regulations now being formulated, the FCC announced that the power of metropolitan stations in Area I will be limited to 20 kilowatts radiated power and antenna heights will be restricted to 500 ft., except in unusual cases.

This is the first indication that FCC plans to control FM power. It was pointed out that due to the necessity of grouping stations closely in the Northeast, power must be held down. Antenna height is limited because the higher the antenna, the more power gain.

Community stations generally will be limited to 250 watts radiated power and antenna heights of 250 ft. Rural stations, which may operate in Area II, will be licensed to cover large areas and will be of high power, according to FCC engineers.

- **New England Benefits**—Broadcasters generally were agreed that the commission's original allocations, in which 20 channels were to have been reserved, would have deprived many New England areas of good service, due to heavy population and mountainous terrain. At hearings in late July and early Aug-

ust, the radio industry vigorously opposed the commission's plans. The new allocation is a compromise between the FCC's first proposal and those offered by broadcasters.

- **Another proposed regulation** governing duplication of programs on standard and FM stations will not be adopted, the commission disclosed. The proposed rule would have made mandatory two hours daily of FM programs not duplicated on any other station. AM broadcasters opposed the rule.

- **No Limit on Time**—All FM stations will be licensed for unlimited time operation, but required to operate a minimum of six hours daily at the start.

FM antenna sites must be shared by licensees (BW-Jul.21'45,p.34). The commission served notice that it will grant no FM license or renewal to a person who "(1) owns, leases or controls a particular site which is peculiarly suitable for FM broadcasting in a particular area and which is not available for use by other FM licensees; if (2) no other comparable site is available in the area or when (3) the exclusive use of the site by the applicant or licensee would unduly limit the number of FM stations that can be authorized in a particular area or would unduly restrain competition among FM stations."

- **Six-Station Limit**—Multiple ownership regulations of standard broadcast stations which forbid one ownership of more than one station in a single service area will apply to FM. In addition, the FCC has ruled that no single licensee may own or control more than six FM stations.

No rule was adopted regarding ownership of FM stations by licensees of AM stations. When such a rule was proposed, the broadcasting industry unanimously opposed it.

- **Channel for Facsimile**—The FCC proposes to encourage facsimile trans-



NEW USES FOR VERSATILE SYNTHETIC

Neatly combining product research with sales promotion, Comprehensive Fabrics, Inc., distributors of B. F. Goodrich Co.'s Koroseal, recently invited editors of 24 magazines to try their hands at designing with this synthetic fabric. The results as displayed in New York this week, while not all new, could drum up business for Goodrich's war-expanded productive capacity for polyvinyl chloride, base material for Koroseal. House Beautiful's suggestion was "scrubbable furniture" (above) with cushions upholstered in Koroseal fabric and supported by extruded Koroseal strapping. Other exhibits included Glamour's luminous accessories for dark clothes closets, American Home's wall paper, and Esquire's lightweight golf bags.

t be sta
p.34).
that it
renewal to
s or cont
cularly
a partic
able for
(2) no of
in the m
use of m
ensee w
FM stati
a partic
train co
"
owners
roadcast
p of m
service a
a, the F
ensee m
ix. FM
ding o
censes
a rule
dustry
The FO
ile bro



Thoughts that the Boss never hears...

WHEN employees get together, they talk shop. They span a lot of little things, and some big ones.

This sort of session seldom hurts anyone. Mostly it clears the air. After they get through with the grouching they add up the good points.

It is something on the right side of the ledger if, when the good points are added up, they include opportunity and reasonable freedom from worry about the future.

This is why a sound pension plan is a good investment. For the veteran employee, it brings a feeling of security. For the rising youngster sees a chance for advancement through the regular retirement of older men.

Conditions at present are very favorable to the installation of a pension or retirement plan. Many organizations are adopting them. You can profit by discussing the

John Hancock pension plans in detail.

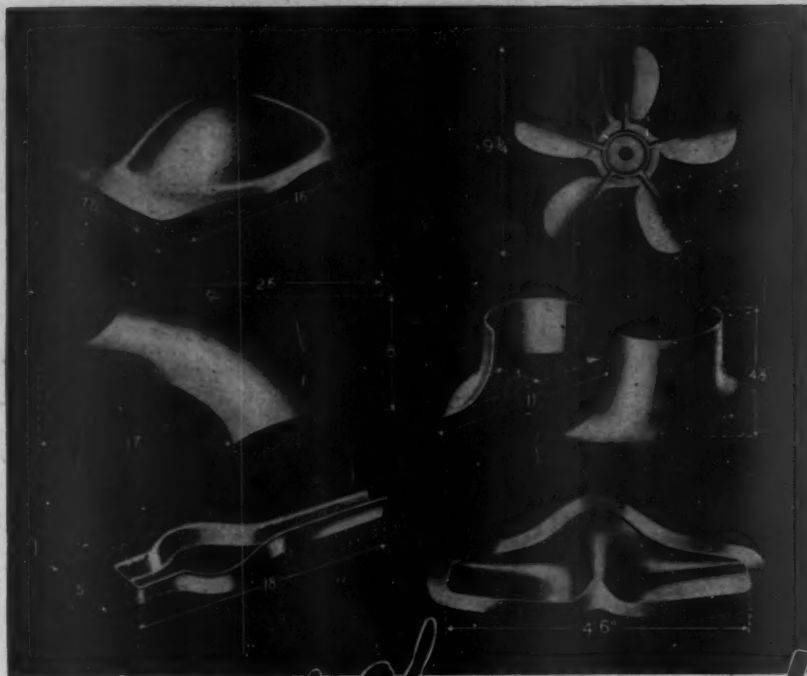
John Hancock plans are long-range and broad in scope. They are flexible. They are adaptable to a variety of special needs and conditions.

For full information, consult the John Hancock agent in your locality or write the home office of the company.

John Hancock
LIFE INSURANCE COMPANY
OF BOSTON, MASSACHUSETTS

GUY W. COX
Chairman of the Board

PAUL F. CLARK
President



Shapes of things to come!

INVESTIGATE The CECOSTAMP

for moderate runs or for finishing operations on long-run production.

The CECOSTAMP is a high production, impact-type drop stamp designed to form metal parts from sheets of high strength and great resilience. The CECOSTAMP is in use in practically every airplane factory in the U. S., Great Britain and the U.S.S.R. Dies for the CECOSTAMP can be made quickly, easily and inexpensively from lead, zinc, Kirksite or similar metals that can be poured in sand molds. No matter how springy or resilient the metal, a blow from the CECOSTAMP results in a permanent set. Write for complete information.

WILL YOUR PEACE-
TIME PRODUCTS
INCORPORATE
SHEET METAL
PARTS LIKE
THESE?



CHAMBERSBURG ENGINEERING CO. CHAMBERSBURG, PENNA.

CECOSTAMP

casting by permitting transmission of FM channels when the channels are not required for rural broadcasting. Area II of the band, 106-108 mc., has been allocated to facsimile, until that service moves to its eventual place at 470 megacycles.

Rules and regulations covering commercial FM broadcasting do not affect the 20 channels allocated to educational stations (88-92 mc.). The educational broadcasting rules will come later.

AND NEWSPAPERS, TOO

The Pullman Co. is not letting search for someone to buy it in accordance with federal court order (Aug. 25 '45, p. 38) unsettle its traditional role as an ingratiating host.

Most recent refinement of its service now installed on 21 trains, is gratifying distribution of newspapers to Pullman passengers. The papers (1,300 daily) presented—with a bow—by porters.

So far, eleven Pennsylvania R.R. Chicago-New York trains and ten trains on the Atlantic Coast Line, Baltimore, Ohio, Chicago & Eastern Illinois, Northern, Louisville & Nashville, Northern Pacific, and Southern Railway have this service.

Union News Co. holds the contract to rush papers from Baltimore, Chicago, New York, Philadelphia, and Washington to be put aboard at stops three to six hours' travel from the respective cities. Publishers in other cities furnish their own papers aboard at outlying stations.

Negotiations to provide free papers for Pullman passengers on Chicago, Burlington & Quincy, and Chicago & North Western trains are progressing well.

Some other roads frown on the service because they fear it might offend commuters.

SAN DIEGO BAY PROGRAM

Dedication of the new 8,500-ft. runway on Lindbergh field recently gave San Diego a tangible start on a harbor development program of large dimensions. The runway, built at a cost of \$3,500,000, is the longest in the West. It is one of the prominent topographic features of the San Diego Bay area.

Eventually, it is expected, some \$20,000,000 will be spent on improvement of the harbors of San Diego Bay and Mission Bay for postwar expansion of commercial shipping and for recreation.

An additional \$3,500,000 is to be spent for auxiliary airports and facilities and \$4,500,000 for piers, dredging, dockage, and warehouse facilities in San Diego Bay. Funds realized by the city harbor department from rentals

es (the department holds all tidelands trust from the state) have averaged 80,000 a year for several years. These, with federal grants, will finance the work.

San Diego voters recently authorized \$2,000,000 of bonds to start a \$10,000,000 improvement of Mission Bay harbor as a recreational area. The City Planning Commission plans to acquire 1,000 acres of land around the bay, to build two bridges and lengthen two others, and to dredge a yacht harbor.

Harried Quarriers

Nation's stonecutters get so many orders for tombstones, as result of higher wage levels, that they can't fill them.

The nation's quarriers of marble and granite have more orders for tombstones than they can fill. This is not attributed to the death rate but to the pay envelopes of the living. Thousands of graves went unmarked during the depression that got under way in 1929. Today, Americans with money in their billfolds are bolstering their pride by investing in tombstones for departed members of their families.

The Vermont industry reports that sales of marble for tombstones currently exceed those of 1939 by more than one-third, and that the demand is increasing steadily.

Georgia reports a similar increase. In Wilkes County, granite has become a \$10,000,000-a-year industry. In Tate, Ga., home of one of the country's largest marble industries, about a dozen new saws were opened recently, and the Georgia Marble Co. plans a \$1,000,000 postwar expansion.

Source of the Increase—Backlogs of orders range from a few months to a year and a half, and the industry, doing the best it can to meet the demand, finds that its best is none too good under war conditions. That wartime employment and wage rates are responsible for the marble-granite boom is generally conceded.

Low-Priced Volume—Most monuments sell for a retail price of \$300 or less, but there is also a heavy demand today for those selling between \$300 and \$1,000. The War Production Board has ordered that a special permit must be obtained for construction of any monument costing more than \$1,000 at retail. While some such permits have been granted, the volume of the present business is in the lower priced brackets.



An Answer to Your Questions on Materials Handling!

● This new folder pictures the many advantages of Mobilift's engineering, operation and economy. It explains how Mobilift is designed to meet today's rapidly changing trends in materials handling. It illustrates how Mobilift is speeding up warehousing and production, reducing handling costs in various types of industries. Every executive who wants to lower handling costs should have this folder on file.

SEND FOR YOUR FREE COPY TODAY!

Sales Offices:
34-48 Steinway St.
Long Island City, N.Y.
2430 So. Parkway
Chicago, 16, Ill.
107 Walton St., N.W.
Atlanta, Ga.

MOBILIFT

Moves Materials like a Giant!

VAUGHAN MOTOR COMPANY • 835 S.E. Main St. Portland 14, Oregon

AMERICA DRINKS ITS WATER FROM PAPER CUPS — SAFELY



Only in America is safe, pure drinking water available everywhere . . . but only with single-service cups can we drink it freely without fear of cold germs and other infections. Wise management has found that it pays to protect factory workers' health and production efficiency by providing one of these four famous brands at each water cooler.

Ajax PAPER DRINKING CUPS

ALSO AERO



COLUMBIAN



PEERLESS



LOGAN DRINKING CUP CO.
Worcester 5, Mass.

PACIFIC COAST ENVELOPE CO.
San Francisco 7, Calif.

Divisions of

UNITED STATES ENVELOPE COMPANY

Television Race

CBS rushes work on pilot transmitter for high-frequency broadcasts. It's counting on color to sell the public.

Columbia Broadcasting System is letting any grass grow under its feet in the race between high-definition television in the ultrahigh wavelength and standard television (the only kind now available to the public) in the lower wavelengths. CBS now expects to have a pilot transmitter for high frequency, color television operating from the top of New York City's Chrysler Building before the end of the year.

• **Fight Against Time**—The first leg of the television race went to the Radio Corp. of America, with its heavy investment in standard television, where the Federal Communications Commission assigned television six channels in the lower part of the radio spectrum (BW—Jun. 30'45, p90). CBS had urged that television be limited to the higher wavelengths when FCC reallocated the spectrum.

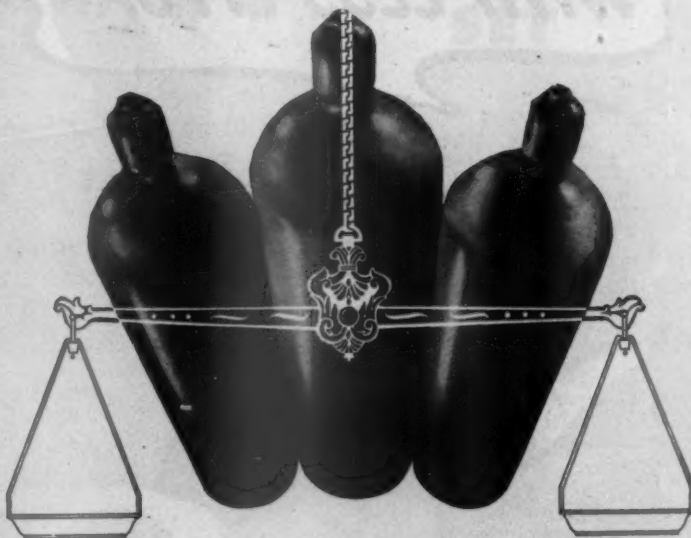
Now CBS is fighting against time to perfect high-definition television, with its great superiority of detail, before the industry and the public have increased their investment in existing types of transmitters and receivers to the point where a shift to the top of the spectrum might be too costly. CBS is gambling, as well as fighting, because the practicability of high-definition television has yet to be finally proved. The new transmitter will provide the crucial test.

• **Two Transmitters**—CBS engineers are building the pilot transmitter and the handful of receivers which will be used to test it. Another high-definition transmitter, which can be used for full-scale commercial transmission, is now being built for CBS by Federal Telephone & Radio Corp. (BW—Oct. 21'44, p95).

As soon as the Federal transmitter is ready, CBS plans to spot two or three hundred receivers in key locations around New York City—hotels (several are interested), department stores, and such—comparing high-definition, color television with medium-definition black and white in full view of the public. The new transmitters can broadcast in either black and white or color, but CBS is counting on color to put its package over.

CBS is banking everything on these tests to swing public support to the new standards. To prod opinion, the

BALANCED



FOR MAXIMUM STRENGTH AND MINIMUM WEIGHT

There's a perfect balance between strength and weight in Hackney Cylinders. Due to the Hackney process of cold drawing, sidewalls have been kept uniform in thickness and all excess material eliminated. To further improve the physical properties, finished cylinders are subjected to laboratory-controlled heat-treatment.

Entirely seamless in construction, Hackney Cylinders are made to give lowest transportation costs, full protection to product, ease of handling and utmost resistance to transportation abuse.

Pressed Steel Tank Company engineers have a complete understanding of gases and their attendant problems. Their experience can be of help to you in determining the most practical and economical cylinder for your needs. Write today—there is no obligation.

Hackney

Pressed Steel Tank Company Manufacturers of Hackney Products

1493 South 66th Street, Milwaukee 14

1397 Vanderbilt Concourse Building, New York 17

208 South La Salle Street, Room 2072, Chicago 4

535 Roosevelt Building, Los Angeles 14

CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

pany can be expected to back these
ings with advertising, publicity,
general hullabaloo.
mits Granted—While CBS is the
broadcaster actually assigned space
he spectrum for high-frequency ex-
mental television, FCC has issued
struction permits to three other
panies: Allen B. DuMont Labora-
es, Passaic, N. J.; Philco Corp.,
Philadelphia; Zenith Radio Corp.,
Chicago. Three companies have appli-
cations for construction permits pend-
ing with FCC: Raytheon Mfg. Co.,
Chicago; North Jersey Broadcasting Co.,
Jersey City, N. J.; Midland Broadcast-
ing Co., Kansas City, Mo. Philco has
been issued 19 construction permits for
experimental television relay stations
in the ultrahigh frequencies, looking
toward its projected relay network.
Meanwhile, RCA is sticking to its de-
termination to push medium-definition,
black and white television in the be-
lieve that this will more than satisfy a
public which has become avid for tele-
vision during the war and won't want
to wait for the development of higher
standards. RCA is hedging its bets,
however. An RCA transmitter on the
Empire State Building has been con-
ducting limited field tests with ultra-
high frequency television. There is no
progress report, but RCA has not ap-
plied to FCC for a regular experi-
mental license similar to that granted
CBS.
Constant Reminder—CBS likewise is
being safe, maintaining its established
medium-definition, black and white tele-
vision broadcasts. But CBS, unlike
RCA, will not expand this service un-
less it is reluctantly forced to give up
higher frequencies. In the mean-
time, the audience of the CBS stand-
ard television station, WCBW, in New
York City, is reminded on every pro-
gram that, "Our facilities and your re-
ceivers are built on prewar standards,
using narrow transmission bands and
lower frequencies."
RCA estimates that it will be six to
eight months before it can put stand-
ard television receivers on the market
in any volume. CBS hopes that the
manufacturers' row with FCC over
whether new FM (frequency modula-
tion) sets shall be built to receive two
bands of the spectrum—the new band
which FCC has allocated to FM and
the old band on which existing sets
operate (BW—Aug. 25 '45, p. 8)—will de-
lay set manufacture, keeping standard
television receivers off the market until
the ultrahigh frequencies have been ex-
plored.
CBS has developed two types of ultra-
high frequency receivers and announces
that it will issue licenses to all who
want them.

FILE FASTER WITH LESS EFFORT



FAMOUS GLOBE-WERNICKE

Every Day FILE

PRE-CLASSIFIES...
ORGANIZES... SAVES HOURS
OF SORTING AT THE FILES

Every Day FILE SAVES WORK

SPEEDS YOUR FILING... HEADS OFF ERRORS IN ADVANCE

NO MORE HUNT-
AND-FUMBLE,
ZIG-ZAG FILING!



On more than a million desks of executives and office employees the daily work is put into a G/W Every Day File minute by minute as each task is handled. Thus every paper is pre-sorted and pre-classified to speed the filing and avoid countless filing errors. You can use any procedure you like, alphabetical (A to Z) ... days of month (1 to 31) ... or set up special indexing on the blank tabs provided. **ONLY the original G/W Every Day File is SO SIMPLE** ... fine appearing ... extremely durable. Makes an ideal "tickler" file.

ASK your Globe-Wernicke dealer about Every Day File for your office—or write to The Globe-Wernicke Company, Norwood, Cincinnati 12, Ohio.

BUY MORE WAR BONDS



Globe - Wernicke
EVERY DAY FILE

Visible Record Systems
Office Furniture
Bookcases
Stationers' Supplies
Filing Equipment
and Systems

Fifth Network

Associated Broadcasting plans for coast-to-coast chain include stress on public service and bid for smaller clients.

Radio and the big networks are running a temperature over the launching of a fifth national network a month by Associated Broadcasting of Grand Rapids, Michigan. But they are watching with interested, if skeptical, eyes the attempt by L. A. Versluis, president of Associated and owner of station WLAV, Grand Rapids, to break into radio big time with a string of coast-to-coast affiliated or cooperative stations. Goal of the fledgling chain: 35 stations covering the major metropolitan markets.

• **16-Hour Fare**—Beginning Sept. Associated plans to broadcast 16 hours daily, stressing public service features and offering a standard network fare: news on the hour, nationally known commentators, sports events, and dance bands.

Using the initials ABC, to which Versluis claims a prior right despite their recent adoption by what used to be the Blue Network (now American Broadcasting Co.), Versluis has lined up as affiliates independent stations in Baltimore, Boston, Buffalo, Denver, Detroit, Los Angeles, Minneapolis, Oakland, Pittsburgh, Portland, Richmond, St. Louis, Salt Lake City, San Francisco, Seattle, and Washington, D. C.

• **Other Relationships**—Cooperating stations that have agreed to use which network programs they like, and lease studios to the network, are WIND, Chicago, WMCB, WOV, New York, and WCKY, Cincinnati.

Associated has been operating as a per-occasion chain, with 196 off-air outlets, since January, 1944. It has aired principally religious, political, and musical programs. Presumably the new work will continue to carry religious programs, which the major chains are reluctant to accept as commercial business.

• **Discounts Up to 40%**—Versluis offers time at a base evening rate of \$4,000 an hour, with discounts running up to 40%. Thus he hopes to sell small businesses and organizations that find existing chain time too costly or at desirable hours—unavailable.

No sponsor names have been released. But Associated executives display confidence that they have found a way to the big stumbling block to any venture in chain broadcasting. This problem

rk
adcasting
oast ch
olic serv
ients.
works an
r the law
network
dcasting
n. But t
ed, if s
A. Ver
nd owner
ids, to h
string of
cooperat
ling chain
major me
g Sept.
st 16 h
ice featu
work fam
ally kno
s, and d
o which
ght des
that use
w Ameri
s has li
stations
Denver,
opolis, C
Richm
a Francis
C.
operating
which
ce, and
are W
MCA
CKY, C
ating a
off-and
It has a
and m
ne new
ligious
chains
ercial b
sluis of
\$4,000
ng up
ill sm
that f
or-at
n relea
splay o
way of
y vent
problem

to get enough advertising revenue
y network costs. Network line
es are disproportionately heavy
they must be prorated among a
number of stations. And, the
sustaining programs the network
the higher its program costs.
Qualities Recalled—The radio indus-
members financial casualties in
attempts. The most recent was
t Roosevelt, but he had a distin-
ed line of forefathers that included
el Insull, Ota Gygi (BW—Sep. 26
28), and Ed Wynn. Hence, trade
ics wonder how Associated, stress-
onevenue public service features
ower-than-average rates, will make
meet.
adio men see in the plans currently
nounced by Versluis and Associated
possibilities than meet the eye.
conceivably, in assembling a chain
smaller stations, the promoters might
an eye on FM developments, to
h such a chain seems ideally suited.

COUNCIL TO STAY

is no surprise to anybody in the ad-
ing business that the War Adver-
g Council will continue into the
war period. Created a few weeks
Pearl Harbor as a liaison between
profession and Washington (BW—
21'42p58), the council now sees
as a possible permanent means of
ing business generally to do a job
public service—as well as public re-
s.

will be a couple of weeks before the
cil's postwar prospectus is an-
ced. Of the many trade associations
representing advertisers, agencies, and
a) which finance the council, two
already voted to continue this sup-
and the others are expected to fol-
suit.

ne job the council can be expected
luck: It will not police the indus-
morals and mores, leaving this func-
to individual trade associations and
ment agencies such as the Fed-
Trade Commission and the Food &
Administration. Nor will the
cil undertake to sell advertising,
e, to the public.

OPTS GRADE LABELING

ifeway Stores, the country's second
st food chain, can be expected to
ow the lead of the largest, Great
ntic & Pacific Tea Co., and other
ns, by adopting A-B-C grade label-
of canned goods. Safeway will not
ll out for grades, will combine them
descriptive labels, and will use
only to the extent that it con-
s government grades a reliable
e to buying.



**GET
SET
NOW—
PRINT
YOUR WEIGHTS**

Toledo PRINTWEIGH Scales
keep weight records *right!* No
human mistakes in reading, re-
membering and recording can
slip in. For modern control in
receiving shipping, batching...
get set now with Toledo
PRINTWEIGH! Toledo Scale
Company, Toledo 12, Ohio.

TOLEDO

HEADQUARTERS FOR SCALES

**Giving you first-hand facts on Soviet Russia's
geography - industrialization - resources - people**

Exactly how great is Russia's wealth and power, and, in what
direction will she develop? Drawing on careful study and actual
observation, Mr. Cressey brings you the answers to these pertinent
questions in a concrete, scientific evaluation of the Soviet Union's
economic and human potential. Timely, factual, and written
without political bias, this book will show you Russia's resources—
the likely direction of foreign trade—the background of Her
heterogeneous racial groups—and the geopolitics applying to the
security of the Soviet Union.

Just Published!

THE BASIS OF SOVIET STRENGTH

By **GEORGE B. CRESSEY**

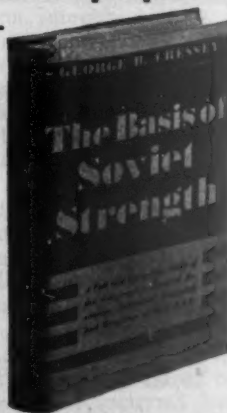
Chairman, Dept. of Geology and Geography, Syracuse University

287 pages, 5½ x 8, 65 photographs, 22 maps, \$3.00

Drawing on his earlier volume, *Asia's Lands and Peoples*,
in preparing this new book, the author has revised and
enlarged the chapters on Russia in the earlier text and
added important material on the pattern of Eurasia, the
Soviet people and the geostrategy and future of the Union.

Here is a consideration of those environmental and
human factors which lie behind the country's achieve-
ments and provide the basis for Soviet strength. The
book gives special studies of population problems, cli-
mate, power, minerals, industrialization, regions, and a
perceptive look into the geostrategy of Soviet Russia and
"heartland" and isolationist trends.

It answers such questions as: What is the economic po-
tential of the Soviet Union; do they have the resources to
duplicate American industrialization? What are the
probable imports and exports of the postwar period, and
what is the likelihood of large trade with the United
States? Is the "Heartland" a secure citadel; can the
Soviets become isolationists?



See it 10 days

Send this McGRAW-HILL coupon

McGraw-Hill Book Co., 330 W. 42 St., N.Y.C. 18

Send me Cressey's *The Basis of Soviet Strength*
for 10 days examination on approval. In 10 days
I will send \$3.00, plus few cents postage, or
return book postpaid. (Postage paid on cash
orders.)

Name

Address

City and State

Company

Position BW 9-1-45

LABOR

Conference Still on Paper

Unless agreement is reached on agenda soon, peace meeting of labor and industry may be delayed several months. C.I.O. leader wins point as Wallace is named to help plan the program.

The proposed industry-labor conference to preserve domestic peace is still a long way from reality. There is talk in responsible circles that it may not be held until November. Some skeptics doubt whether it ever will be held. There are many obstacles to be overcome in preliminary meetings.

• **Taking His Time**—Tipoff to Secretary of Labor Lewis B. Schwollenbach's thinking is his remark Aug. 24 on leaving the White House, where the subject was discussed with President Truman: "The conference can be a success if it is carefully prepared."

Schwollenbach has no intention of rushing into a big meeting of business and labor leaders and risking a flop.

• **What Murray Wants**—Toughest problem to be worked out in advance is the agenda—limiting the discussions and objectives. The representation question also may cause some trouble. Both are scheduled to be aired at a preliminary meeting on Sept. 5.

C.I.O.'s Philip Murray has made it clear that he expects the conference to deal with more than mere machinery for settling disputes and preventing strikes. "The elimination of industrial disputes must rest on a much sounder basis," he declared, characterizing the basis as "the fulfillment of our national objective of an expanding economy with full production and full employment."

A Murray agenda would include national wage policy, minimum wage legislation, the full employment and fair employment practices bills, the annual wage, and statutory protection for small business.

• **Wallace to Help**—The C.I.O. chief won his first point when Truman designated Secretary of Commerce Henry Wallace to help Schwollenbach plan the conference. This will complicate matters. Wallace believes in speaking his mind and doesn't take roundabout ways of doing it.

It is a curious and revealing thing when one segment of labor regards the Secretary of Commerce as its foremost champion, rather than the Secretary of Labor. It accentuates the impression that the A.F.L. is closer to Schwollen-

bach, although the new secretary is trying hard to be impartial. (Schwollenbach used to be lawyer for the teamsters in Dave Beck's northwest domain.)

• **Holding Program Down**—With the possible exception of Wallace and his aides from Commerce, the government people interested in the conference will resist a program anywhere near as broad as Murray proposes. One official remarked, "If you threw all those controversies on the table you would never get through the first course."

The preliminary meetings, starting next week, will be used by Schwollenbach to seek agreement on a limited objective. By that is meant confining the agenda to means, methods, and criteria for settling or minimizing disputes.

• **Bid to Lewis?**—As far as representation is concerned, the problem is how far to go in bringing in independent groups, particularly in labor, without

making the conference unwieldy, creating petty friction, and a resultant loss of tongues. It can be said with assurance that John L. Lewis will participate if invited, and it's very likely that will be. Snubbing him would complicate matters, but his presence won't simplify things much. It would be the first time Lewis, Murray, and A.F.L. William Green sat around one table more than three years.

Regardless of whether the telephone unions and other independent groups are left out or brought in, there will be more difficulties. The A.F.L. and C.I.O. were able to keep the independents off the National War Labor Board but Schwollenbach has said he will at least "consult" them.

LABOR BANS RESTORED

Wartime work permits under which more than 250,000 girls 17 years of age and under took jobs in industrial plants holding government contracts will expire on Oct. 1. On that day, Dept. of Labor bars will again be raised against employment of any girl under 16, and legal restrictions on employment of girls under 18 will be enforced again on public contract work. Girls now employed, however, will be permitted to keep the jobs under present working conditions.

Restrictions which go back into effect also provide that no girl under 18 shall work more than eight hours a day,



LABOR RALLIES FOR FULL EMPLOYMENT

While doors of United States Employment Service offices are thronged with would-be workers and the Senate ponders—with the rest of the country—the merits of the Full Employment Bill, men and women all over the country stage their own rallies for full employment. In Chicago (above) C.I.O. workers assemble before the start of a mile-long parade through the Loop, urge that President Truman use unexpended war appropriations for severance pay.

wildly, c
sultant h
d with a
ill partic
kely that
ould com
ce won't
ould be
and A.F.I.
one table

ne teleph
dent g
there will
.L. and
ne indepe
Labor Bo
d he will

RED

under wh
7 years
strial pla
cts will
pt. of La
nst empl
nd legal
girls un
public cu
loyed, h
keep th
condition
k into eff
ler 18 sh
s a day,

DEMAN
Jos S
SECURITY

aged wi
ntry—th
e count
work
urge the
pay.

pt. 1, 19

How can you judge a business risk?

SHOULD a company be judged, as a financial risk, by a careful computation of its assets and liabilities? By an accurate measurement of its past performance and future possibilities? Or should it be judged by these and more—by the character and ability of its management?

'During the depression, a large Mid-west manufacturing concern faced a crisis in its career. In the company's own words, it was suffering—along with many other business concerns—from "an oversupply of manufacturing facilities and debt, and an under-supply of sales and credit."

In the midst of the crisis, the company found itself, one morning, with a large note called for payment in exactly forty-eight hours. The holder

of the note agreed to extend it under conditions that the company felt were prejudicial to its future. After debating the question for twenty-four hours, the management decided to seek other financial aid.

They came to the Bank of the Manhattan Company. The Bank had to act fast. Recognizing that most businesses were in depression difficulties, the Bank looked at the record, found that the men in charge of the company's destiny were men of character and ability—and granted them a loan in time to save the situation.

Today, that business—P. R. Mallory and Company, Inc. of Indianapolis—is completing thirty years of progress in specialized metallurgy, electronics, and electro-chemistry. It has become a recognized leader in its particular markets. Its techniques, experience, and plant facilities, proved invaluable in developing many critical items for the war-production program.

Meanwhile, the friendly relationship established between the company and the Bank of the Manhattan Company, has continued and grown even closer with the years.

BANK OF THE MANHATTAN COMPANY

New York

THE LABOR ANGLE

Redivivus

Just over four years ago, when the government seized the properties of the Federal Shipbuilding & Dry Dock Co. to enforce the "recommendations" of the National Defense Mediation Board, free collective bargaining ended in America. For all practical purposes, what an employer and representatives of his employees could "agree" to from then on was determined by government policy.

Now, the machinery of collective bargaining, never developed to a smoothly efficient operation and stiff and rusted from four years of disuse, is beginning to turn again. For good or for evil it is the only device we have for filling the labor relations void created by the National War Labor Board's moves in abdicating its wartime functions.

Apprehensive

Every thoughtful employer has already pondered the significance to himself of the changed pattern which the war's and NWLB's end will bring to the labor front. No matter how advanced his preparation for dealing with it, however, or how eager he may be to take advantage of what may appear as an imminent opportunity to have a showdown with a union, apprehension, in greater or lesser degrees, is the one common denominator in management minds as the labor outlook is surveyed. There is general appreciation of the fact that industry will be subjected to severe trials as an organized labor movement, bigger, more powerful than the nation has ever before known, throws off wartime restraints and makes for its goals of higher wages, union security, and full employment.

And for bridging the differences already apparent in outline, for reconciling the inevitable clash of interests, for establishing some workable relationship between labor and management, there is only collective bargaining.

Economics

In the present reversion to collective bargaining, management, which has always been handicapped by a quantitative and sometimes by a

qualitative lack of professional industrial relations executives to match the professional labor leaders, and which has lately been handicapped by government support for labor, begins with a further disadvantage. While some of the forms and considerations which are elements of collective bargaining survived in one fashion or another during the war period, the basis on which employers traditionally fixed their position in collective bargaining negotiations has been virtually nonexistent. This is, of course, ability to pay. Ability to pay has not been a consequential factor in determining wages or conditions of employment for four years, and labor, delighted that it was a war casualty, will resist giving it much weight now that the war is over.

If the unions are successful in largely confining the determinants of labor costs to area standards, industry standards, the cost of living, and the extent of labor's organized strength, many firms face a highly precarious future. Indeed, until ability to pay is restored as the central economic consideration in the labor-management relationship, we are operating under something other than the familiar business enterprise system.

First

Management's immediate task in collective bargaining, therefore, is to reestablish the status quo ante even before establishing defenses against new union powers and demands.

But serious as this problem is, the gravity of the situation can be exaggerated. In going all-out to restore the ability-to-pay principle, over which there is no disposition on management's part to accept a compromise, employers will be learning new techniques and refurbishing old ones which will prove invaluable in equipping them for bargaining over issues which they may consider only a little less vital than totals on a balance sheet. They may also find that the relative weights which they assign to such matters as the hourly wage, the guaranteed annual wage, and the all-union shop have, in the process of fighting for something that is both a principle and a requisite of continued existence, undergone subtle but important changes.

between 10 p.m. and 6 a.m., or contrary to state laws governing home work; that no girl under 18 shall be employed in any job hazardous in nature or dangerous to health; and that no child under 18 shall receive less than the minimum hourly pay set by federal law.

U. S. Pulls Out

Government withdrawal from seized facilities leaves NWLB without any device for enforcement of its orders.

Government withdrawal from plants, mines, and facilities seized by executive order was well under way this week. This virtually leaves the National War Labor Board with nothing to stand on, but the board and its best friend, Economic Stabilization Director William H. Davis, know they have no choice, practically speaking.

• **Army Sets Deadline**—The Navy is ready to pull out overnight from plants it held (Goodyear in Akron, United Engineering in San Francisco and about 100 machine shops in same city). The Army proposed a deadline of Aug. 31 for withdrawing from plants it had seized. Davis has no objection for hard and fast deadlines but agreed on Aug. 31 as a date to shoot for.

President Truman, on Davis' recommendation, revoked 26 seizure orders and amendments, and directed the reversion of the properties "as soon as practicable." This gave Davis a hand as he needs to enable him to look at each case individually, tie up loose ends, and make a clean getaway.

• **Varied Facilities Involved**—Actually the government agencies, with the possible exception of the Interior Department which held five oil companies and coal mines, cannot get out overnight.

The ODT, which operated more than 80 midwest trucking companies, has its own books and accountants, and needed at least a few days to make a clean break. It is letting go of Toledo, Peoria & Western Railroad after more than three years, but Illinois Central, just taken last week, was not among those ordered relinquished (page 99).

The Justice Dept. is taking an active interest in the seizure terminations, it is going to defend claims for the next few years, the government lawyers want to have a little ground floor evidence.

• **Repercussions Expected**—The Labor Dept.'s conciliators have been looking over the field and examining the causes of the original disputes which resulted in seizure. Davis wants as many

ORGANIZER OF "FACT-POWER"

HE makes "Fact-Power" fortify "Sales-Power"

To develop and maintain maximum sales, the experience and skill of your selling organization require "Fact-Power" such as the Remington Rand Systems Technician is highly qualified to provide.

This man can lend you skilled aid in devising fast, accurate and positive sales control by individual account, by territory and by branch office. You'll have visible records that point out when, where, why your men or somebody else's are getting orders... the *live* facts needed in

directing sales for maximum profits.

But why not use the full scope of this man's resources? Let him recommend vertical filing systems best fitted to your method of operation, point-of-use fire protection for irreplaceable records, suitable office furniture, and ring or compression catalog binders that put extra punch in your sales presentations.

It obligates you not at all to see the many ways in which "Fact-Power" can save time and money. Plan now to fortify your "Sales-Power." Call our nearest Branch Office—or write us in New York.

LOOSE LEAF



Now available... a complete NEW line of ring and post binders engineered for all catalog requirements.



HE helps sales leaders put maximum "sell" in postwar catalogs. Effective merchandising of current products and new lines calls for attractive-looking catalog binders that open flat for easy display, withstand long, rugged service and make sheet-changing easy, fast and certain. To meet these requirements in every way, a complete new line of ring books have been added to the vastly improved Remington Rand compression binders.



HE helps to keep stores stocked with well-known food brands. One prominent company required speed and accuracy in providing its field force with monthly sales figures. They eliminated weeks of delay by posting sales to Kardex Visible and photographing results for salesmen on Dextrigraph machine. More productive calls followed. You too can save time, increase volume by directing salesmen with marginal comments on Dextrigraphed Kardex sales record.



HE offers complete new study needed now in shaping and carrying out sales plans. 96 pages, 15 concise illustrated chapters full of success-proven ideas. Contains results of exhaustive research. Shows part played by facts visibly charted for easy analysis and use... the three fundamental controls required for postwar sales management... new sales presentation methods.

"Graph-A-Matic Control for Sales Management" is being used and praised by leading executives. It's free on request.

SYSTEMS DIVISION
REMINGTON RAND
315 Fourth Avenue, New York 10, N. Y.

COPYRIGHT 1946 REMINGTON RAND INC.

Said the Office Manager to the Treasurer:

War regulations taught us to save time and money with paper they made us use.

Said the Treasurer to the Office Manager:

These wartime letter and record papers do the job better because of their cotton content.



A paper made from new cotton fibers lasts longer and wears better than ordinary paper. In letterheads, the cotton fiber permits more erasing and tells customers that yours is a *quality* organization. For keeping records, these papers are better because they stand more use and abuse, and

they last longer . . . So when war restrictions go, preserve this wartime gain. Get the fact and feel of quality by insisting on cotton fiber papers. To get the finest in the cotton fiber field, specify **PARSONS**, which specializes in stationery and record-keeping papers for modern business.

PARSONS
P A P E R S

Made With New Cotton Fibers

PARSONS PAPER COMPANY • HOLYOKE, MASSACHUSETTS

these settled as possible, but he would hold up withdrawals for any substantial period on that account.

It is recognized that next to nothing can be done at Montgomery Ward on the conciliation line.

• **Ward Parley Asked**—C.I.O.'s Union Retail, Wholesale & Department Store Employees last week end sent a communication to Sewell Avery, Montgomery Ward's chairman, requesting a conference looking toward writing a new contract. Union leaders admit that they were simply satisfying the traditional amenities; they expect no change in Avery's well-known position.

Concluding that peaceful persuasion promises little in the situation, the C.I.O. is making plans to call a new strike against the mail-order house. There is some question whether it can get Ward workers to respond now as effectively as in the last walkout called.

• **Still Await Back Pay**—The union has not flourished under the Army's operation of the mail-order properties. Workers are still waiting for the \$1,342,000 in back pay awarded by the National War Labor Board and, while the union has had the check-off and maintenance of membership since last June, it has been able to do very little bargaining with the Army management.

A strike in Wards will have as its basic objective the winning of some form of union security—presumably maintenance of membership—and, as a new demand, a 15¢-an-hour wage increase. It is reasonable to assume that the strikers will get support from a broad section of the industrial union movement.

• **Trouble in South**—An immediate strike is promised, too, by the C.I.O. Textile Workers when the Army is pulled out of the Mary-Leila cotton mills at Greensboro, Ga., and the Gaffney Mfg. Co., Gaffney, S. C.

The fight on union security at Gaffney has lost none of its bitterness. The union, suspecting that the Gaffney plant might be closed, is asserting that production there under the Army went up one-third with few additional workers.

• **NWLB Windup**—More signs of NWLB liquidation: The board has, in effect, tossed 3,000 disputes back at the principals and told them to try collective bargaining again since the new wage policy gives them more room to operate (BW—Aug. 25 '45, p15).

As alternatives, the board suggested either acceptance of hearing officers' reports as final decisions, voluntary arbitration, or a streamlined procedure which would eliminate appeals from any findings of an NWLB panel, regional board, or commission. Finally, the NWLB said, if nothing else, please try to settle some of the issues and the board will do what it can with the rest.

Otherhood Row

Fight between engineers firemen is back of federal seizure of the I. C. Unions seek control of postwar jobs.

The Illinois Central R.R. remained under control of the Office of Defense Transportation early this week as efforts continued in Washington to iron out differences of the I. C.'s Brotherhood of Locomotive Firemen & Enginemen, which called off a scheduled strike last week when ODT took over.

Otherhoods Battle—Public statements confused the threads of the tangled controversy. The firemen retorted that they are fighting the I. C. management, not the Brotherhood of Locomotive Engineers. Management retorted a "false impression" that it is having trouble with its employees. The I. C. said little, significantly offering no help to its brother organization. A back room tussle is brewing between the two I. C. rail brotherhoods for top control of postwar jobs—and membership. Recent recommendations following investigation by an emergency board appointed by the President left the dispute deadlocked.

Dispute Over Old Rule—One key to the difficulty lies in a rule, written into the I. C. engineers' working agreement in 1911. This rule gives the engineers, not the firemen, control of what names go on the union's extra board or working list, and say-so as to when qualified "pro-



F. Kirk, Office of Defense Transportation's western railroad director, named manager of Illinois Central Railroad when, in the face of a strike threat, government took over.



Florida ON THE ASSEMBLY LINE WITH WING REVOLVING HEATERS

HOW about moving the assembly line to Florida or California next winter? Think any of the workers would object?

Well, the next best thing is installing Wing Revolving Heaters right now. For when winter weather starts chilling the air around your plant, your workers are going to feel mighty glad you installed the heaters with the revolving discharge outlets. Because the gentle air motion created by the constantly changing direction of these outlets brings a sensation of fresh, live, invigorating warmth to workers, a sensation of summer outdoors—perhaps not Florida or California, but something pretty close. This effect on the workers is a great aid to production, which applies all year 'round, for in summer, with the steam turned off and the fans on, these revolving discharge outlets provide a cooling effect that is equally effective in accelerating production.

Follow the example of many of the country's leading industrialists—install Wing REVOLVING Unit Heaters.

L. J. Wing Mfg. Co. 167 W. 14th St., New York 11, N. Y.
Factories in Newark, N. J. and Montreal, Canada

Wing REVOLVING UNIT HEATERS



The story of the Revolving Unit Heater is told in Bulletin HR-4. Write for a copy.



AMPLICALL

*quality-built
to serve
dependably*

The engineered excellence and high quality construction of AMPLICALL Paging and Two-Way Communications Systems is well known to the thousands of industrial firms who use them. That, combined with AMPLICALL's multiple features, flexibility of design to meet Recon-version Changes and low operation cost is good reason for its preferred rating. Find out now how AMPLICALL can get things done faster, more accurately for you with truly effortless efficiency.



AMPLICALL
Weatherproof
Speaker

W200 Series AMPLICALL with facilities
for up to 24 master stations and up to 12
possible conversations simultaneously.

AMPLICALL
Sound Control
Unit

Electroneering is our business

Rauland

RADIO...RADAR...SOUND...COMMUNICATIONS
Rauland employees are still investing 10% of their salaries in War Bonds
The Rauland Corporation . . Chicago 41, Illinois

moted firemen," who move up to engineers' jobs as needed, shall establish date of seniority as engineers.

The I. C. is one of only half a dozen major roads that do not observe the standard firemen's rule which is part of the 1913 Chicago Joint Workers Agreement. This 1913 rule is what the I. C. firemen say they want to enforce. It provides that a fireman's seniority date as an engineer begins the day he first serves as an engineer, does not mention the extra board.

Firemen's officers say that in the Chicago district only 30 of 110 promoted firemen on the I. C., most of them having served as engineers for a long time, have been placed on the engineers' seniority roster since 1937.

The emergency board suggested that the 1913 firemen's rule now in effect on most roads be thrown out in favor of the 1911 engineers' rule.

• **Want Lower Minimum**—Another controversy hinges on a 1931 rule interpretation, formally written into the engineers' working agreement, tacitly practiced by the firemen. This interpretation lets the local engineers' chairman decide minimum and maximum monthly mileage engineers shall run; on the I. C., this is 3,000 mi. to 3,800 mi. for engineers in freight service.

Firemen, avid for the higher pay now want the minimum reduced to 2,600 mi. to allow more promoted firemen to earn wages as engineers—and to keep a larger number of promoted firemen on the engineers' extra board. This would prevent any of them being pushed back to the ranks of the firemen (to compete for firing jobs) whenever he fails to run 3,000 mi. in a month as an engineer.

• **Compromise Plan**—On this point the emergency board offered a compromise. Let the firemen specify the minimum earnings that a promoted fireman must roll up in a month before he goes back to firing, and let the engineers set their own limits on full-time engineers. The engineers did not like this, but grudgingly said they would accept it.

The situation that led to this new strike and actual federal seizure has been festering for eight years. In 1937 the I. C. held its first examination for four years to qualify firemen as engineers. The firemen protested to the management against the engineers' rule then and also in 1941. In the absence of any showing that a man or men had been deprived of work opportunity, the management disclaimed any power to change the situation.

Last February the firemen voted a strike after the Railroad Mediation Board had ruled that their complaint (filed against the I. C.) was outside its jurisdiction.

Elemental Strife

Mine union's complaint
members got no pay for the
vanadium content of vanadium
is heard by U. S. grand jury.

One angle of the mysterious anti-
investigation being conducted by
federal grand jury in Denver into the
product of the two principal U. S. pro-
ducers of vanadium (BW-Jul.14'45,
) U. S. Vanadium Corp. and Vana-
m Corp. of America, was clarified
week by furious complaints from
district 50 of the United Mine Work-
The union protested that diggers of
ore had never received any pay-
ment for its uranium content.

Veiled in Secrecy—Carnotite ores of
western Colorado and eastern Utah
contain vanadium, radium, and ura-
nium, the latter being the vital element
the atomic bomb and one that may
one day provide fuel for an atom-pow-
ered industry (page 57). As with all
other elements of the atomic bomb ex-
periments, the production of uranium
has been, and in some respects con-
tinues to be, veiled in secrecy.

This area is the principal U. S. source
of uranium. The carnotites are found
in scattered lenses and pockets of a sand-
stone formation, but rarely in large
quantities. Some claims are independently
owned. Some are leased by the two
companies to miners who are paid for
ores on the basis of vanadium content.

Union's Contentions—District 50 com-
plains that the companies closed down
their own mines and continued to pur-
chase ores from independents when
the vanadium supply became sufficient,
but continued to buy only on the basis
of the contained vanadium, with a lower
price of 2%. Somebody therefore got
the uranium values, the union con-
tends, and it wasn't its members. Ore
diggers say they were not told that the
uranium in the ores had any value.

J. L. Robison, general superintend-
ent of the U. S. Vanadium Corp. at
Glen and Grand Junction, Colo.,
said his company felt it had "nothing
to apologize for." "We are handlers
of vanadium, not uranium," he con-
tinued. "There never has been and is
not now any general market for this
element, and, except for current gov-
ernment demand, there is nothing to
do with it except to stockpile it."

"Not in Uranium"—In further clarifi-
cation of his company's position, Rob-
ison said:

"We are not in the uranium business
and do not have any interest in that
metal. I feel that producers have been

EVEN JUNIOR CAN'T
DENT IT—IT'S MADE
OF ROEBLING
STRIP STEEL!

BETTER TELL SALLY
TO GIVE UP TOO—
THAT'S ROEBLING
ELECTRICAL WIRE



JACK
MARKOW

Roebling produces every major type of wire and wire product... house
wire to telephone cable... bridge cable to wire rope... fine filter cloth to
heavy grading screen... strip steel and flat wire to round and shaped wire...
all Roebling products. All the result of over 100 years of specialization.
John A. Roebling's Sons Company, Trenton 2, N.J.



ROEBLING

PACEMAKER IN WIRE PRODUCTS

WIRE ROPE AND STRAND • FITTINGS • SLINGS • SUSPENSION BRIDGES AND CABLES
COLD ROLLED STRIP • HIGH AND LOW CARBON ACID AND BASIC OPEN HEARTH STEELS
AIRCORD, SWAGOLD TERMINALS AND ASSEMBLIES • AERIAL WIRE ROPE SYSTEMS • ROUND
AND SHAPED WIRE • ELECTRICAL WIRES AND CABLES • WIRE CLOTH AND NETTING



The truck-trailer that steers from both ends

EVER see the fire department's long hook-and-ladder come clanging down the street with a "co-pilot" perched high on the back to help steer it around corners?

We have a thirty-foot over-the-highway trailer unit that operates the same way—only it doesn't need an extra driver!

An amazing device, the Hoobler Undercarriage, makes this possible. Installed on a semi-trailer in place of the conventional tandem axle, this new undercarriage does just about everything except think for itself (and some observers swear it does that!).

Besides permitting commercial trailers to make

square turns in close quarters, the Hoobler Undercarriage lowers cost per ton mile, eases driver fatigue, reduces running time, saves tires and permits a tremendous increase in pay load.

Of course you may never be in the market for a trailer undercarriage. But you may be able to use the designing and fabricating skills which brought this new invention to perfection. Perhaps a few hours spent with our engineers will show that your products, too, may be improved and perfected — manufactured faster and more economically the Union Metal way. Your inquiries are invited by The Union Metal Manufacturing Company, Canton 5, Ohio.

**BUY MORE
WAR BONDS
and
keep them**



UNION METAL
Craftsmen in Steel Fabrication

treated squarely. In case of extremely difficult access conditions to mines, they have had special premium prices, but the general scale of prices has been such that some of them have made quite a lot of money.

"In many cases where they have been trucked in ores not quite coming up to our 2% minimum standard, we have made set-aside arrangements by which they could bring in trucks of richer ore and receive payment on the vanadium content of the whole. We have of course gone on buying the ore on the vanadium content basis, because that is all we are interested in."

• **Government Agents**—U. S. Vanadium Corp. built a mill in 1940 to mill the vanadium tailings for uranium, and more recently the government has built another uranium mill in western Colorado. Robison said, however, that security regulations still prevent giving out news of those mills. Both U. S. Vanadium and Vanadium Corp. of America have acted as government agents in buying ores and concentrates.

In Denver antitrust officials confirmed the fact that the diggers' charges were one cause of the grand jury's hearing called, but would say nothing else save that the investigation is now nearly complete.



RUBBER TO SHAPE METAL

By using a solid 273-lb. chunk of heat-resistant synthetic rubber in the 600-ton hydro-press at its San Diego experimental factory, Consolidated Vultee Aircraft asserts, it speeded up production of magnesium aircraft parts and cut costs. Developed by United States Rubber, the compressed pad flows into all irregularities of the die and forces magnesium sheet to the desired form. When pressure is released, the rubber resumes its shape.

of extreme
to mines, the
n prices, and
has been re
made quite
they have
coming in
rd, we have
ts by which
of richer re
ne vanadium
We have
ore on the
because the
S. Vanadium
to mill the
anium, and
ent has built
western Cal
however, the
event giving
Both U.S.
Corp. of
government
concentrate
ficials em
ers' charges
d jury's be
nothing else
is nowhere

AL

of heat
the 600
Diego ex
ited Val
up pro
ft parts
United
sed paid
the de
to the
e is re
s shape

1, 1940



What do you know about your insurance?

DO you know whether your fire insurance covers damage to possessions of guests or servants? Can you say, offhand, whether your burglary insurance also covers damage caused by burglars? If unable to contact your agent in an emergency, have you a written, complete record to tell you whether you are

fully protected? *You need this free U. S. F. & G. Personal Insurance Audit Book!*

Clear, simply-worded, and with each hazard illustrated, this new Personal Insurance Audit Book enables you to make *your own* complete insurance audit. It provides a permanent record of property value,

amount of present insurance, premium rates, expiration dates, etc., thus giving you your fire and casualty insurance picture at a glance. To obtain your copy, simply fill out and mail the attached coupon. Your Personal Insurance Audit Book will be delivered to you promptly. Mail the coupon today.

CONSULT YOUR INSURANCE AGENT OR BROKER AS YOU WOULD YOUR DOCTOR OR LAWYER

U. S. F. & G.

UNITED STATES FIDELITY & GUARANTY CO.

affiliate

FIDELITY & GUARANTY FIRE CORPORATION

HOME OFFICES



BALTIMORE 3, MD.

UNITED STATES FIDELITY & GUARANTY CO.
133 E. REDWOOD STREET
BALTIMORE 3, MARYLAND

Please send me a complimentary copy of your new Personal Insurance Audit Book.

Name.....

Address.....

City.....State.....



NORTH CAROLINA—STATE OF *Progress!*

With an unpleasant job behind us, North Carolina turns from the destruction that is war to the arts of peace to again devote its full energies toward the building of a more progressive economy. Few states can equal the record achieved by North Carolina in the past two decades. In commerce, in industry, in agriculture; in education, in government and in social progress, the Old North State enjoys a justly earned reputation for being "out in front."

The future beckons with potentialities far greater than anything achieved in the past. A state of vast resources populated by a progressive and friendly people spells opportunity unlimited for North Carolina.

The Seaboard Air Line Railway, like North Carolina, made its full contribution to the winning of the war. As an integral part of North Carolina, the Seaboard joins its friends and neighbors of this great state in the call... "Back to Progress."

SEABOARD
AIR LINE RAILWAY

THROUGH THE HEART OF THE SOUTH

If you want a reprint of this advertisement in full color, write Seaboard Air Line Railway, Norfolk 10, Virginia.

Buy more WAR BONDS!

How Old Is Old

With 40% of labor force in the over-45 bracket, industry must answer that question now as postwar weeding-out begins

The peacetime employment of women, youths, and veterans has been a subject of prolonged discussion, and has had important headings in postwar plans. But the problem of the older worker in the postwar labor market has been largely neglected until recently. Now it is getting some concentrated attention. It has been brought into sharp focus by studies just made available by the U. S. Dept. of Labor.

• **40% Over 45**—Census figures show that approximately 20,000,000, or close to two-fifths, of those employed in the civilian labor force, are 45 years of age and over. Nearly 3,000,000 are over 65, above the pension retirement age set by the Social Security Act.

War manpower needs brought an estimated 2,000,000 older workers back into jobs. Many thousands of actually retired workers returned to gainful employment.

• **Fear Idleness**—Many of the 20,000,000 who shade 45 are wondering, with good reason, whether they and their contemporaries won't bulk large in the breakdown of postwar unemployment statistics.

The prewar trend showed a steady reduction of the proportion of older workers in industry. In 1920, 34% of the population which was over 65 was gainfully employed; in 1930 it was 33%; in 1940, 23%, reflecting the start of old-age pensions and a crowded labor market in which employers could set and stick to what they believed was high employment standards (BW-Feb 5'44, p120).

• **Forty-Plus Alumni**—The 1930-1940 decade which saw the weight of the depression bear with heaviest incidence on the older worker witnessed the growth of many organized efforts to sell the values of seasoned personnel to management. This was the period when almost every large city had an active "Forty-Plus Club" (BW-Aug 13'38, p30). During 1942 and 1943, a majority of the "Forty-Plus" associations ceased to function, but 16 of them are known to be still operating and many of the others maintain their organization by holding regular "alumni" meetings.

Roland R. Darling, director of the pioneer Boston club, who is now head of the Veterans Reception Center of the Greater Boston Community Council,

Old

labor for

et, indu

stion ne

out begi

loyment

ns has be

cussion, a

gs in po

of the ol

r market

til recent

concentra

brought in

made an

labor.

figures sho

00, or clo

oyed in

years of

00 are ov

ement a

Act.

brought a

orkers bu

of actual

gainful e

he 20,000

dering, a

they an

bulk larg

unemploy

d a struc

n of old

0, 34%

ver 65

80 it w

ecting th

a crowd

oyers cou

ieved wa

BW-Fel

1930-194

of the d

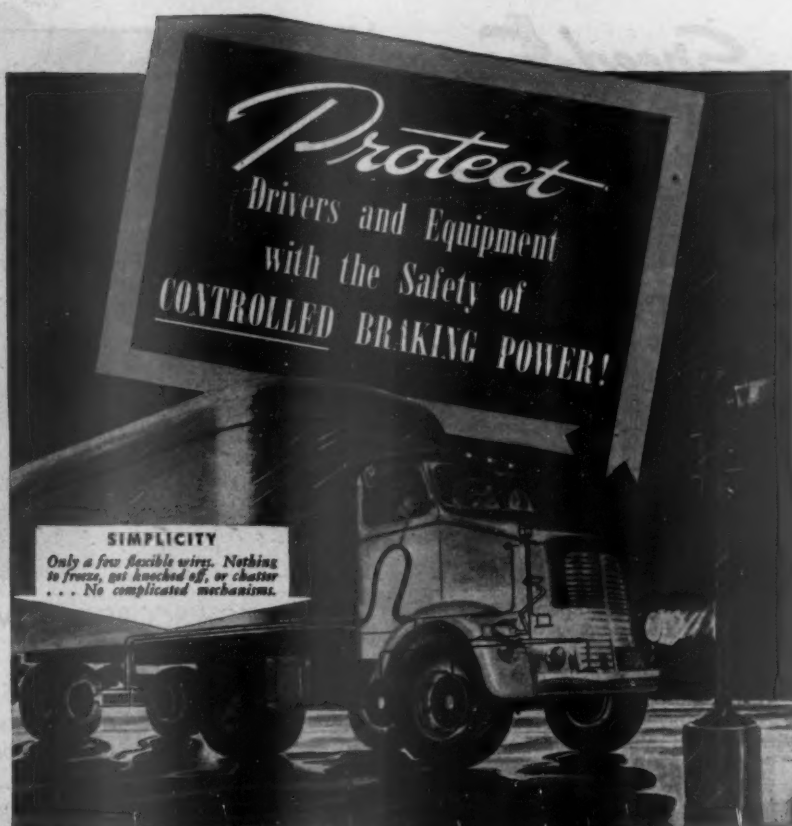
contains an extensive correspond-
with leaders of other "Forty-Plus"
He reports a revived interest and
the plan is being held ready for
when it is needed again.
Success—The "Forty-Plus"
ent and other attempts to hold a
ionate place for the older worker
apidly constricting labor market
only limited success because
or supply surfeit provided no eco-
incentive for employers to ex-
the special usefulness of the over-
up.
insatiable demand for labor cre-
the war has changed all that, and
the language of the personnel ex-
ave come the words geriatrics
medical care of older people), ge-
gy (the study of the aging proc-
and gerontotherapy (the direct
ent of the aging process) which
ted anatomist, Dr. E. V. Cowdry,
consultant to the U. S. Public
Service, describes as a "union of
best in medicine and sociology,"
adowing a new type of public

Infallible Index—Authoritative
studies, conducted under the

PENTHOUSE
BALLROOM CLUB 65 BAR
13 TOM MOONEY HALL 13
RESTAURANT

IONS CLUB TOGETHER

better to fraternize, three New
C.I.O. unions have joined forces
operate Club 65 for union mem-
and their guests. Launched pri-
ly by Local 65 (Wholesale &
house Workers), the club is run
om Mooney Hall Assn., of which
Retail Employees and the Win-
Trimmers & Displaymen locals
also members. The association,
club privileges—its facilities in-
cafeteria, restaurant, classes—
en to A.F.L. and C.I.O. unions.



Protect
Drivers and Equipment
with the Safety of
CONTROLLED BRAKING POWER!

SIMPLICITY
Only a few flexible wires. Nothing
to freeze, get knocked off, or chatter
... No complicated mechanisms.

★ SPECIFY ★ WARNER "VARI-LOAD" ELECTRIC BRAKES

WHEN a driver of a big tractor-trailer outfit lacks confidence in
its old-fashioned braking system, and gets the habit of "jam-
ming on the brakes" to slow up or stop—it means plenty of wear and
tear on tires, braking mechanisms and rolling stock. And often emer-
gencies which call for such drastic application of brakes results in major
damage due to accidents.

The proved way to **AVOID** all these situations, is to equip with Warner "Vari-
Load" Electric Brakes — with braking power under *instant* and *complete* control at
all times. Drivers can pre-set the brakes on the trailer to fit both road and load
conditions. Thus all stops—emergency as well as run-of-the-road—can be made
confidently and without undue strain on the driver or equipment . . . protecting
himself and cargo, and preventing loss of time spent on maintenance work, or
costly delays due to wrecked equipment.

On all future trailer purchases, specify Warner "Vari-Load" Electric Brakes—world-
famous for safety, simplicity, and dependable, efficient, trouble-free performance.

WARNER ELECTRIC BRAKE MANUFACTURING COMPANY, Beloit, Wisconsin



Speed Sweep WITH A BACK OF STEEL



Makes Light Work Out of Tough Sweeping Jobs

Steel back of Speed Sweep brushes is the basis of unique construction for faster, easier, better sweeping. Block is $\frac{1}{2}$ usual size—easier to handle. Tufts of longer, better fibres are more compact—provide "spring and snap" action. Handle instantly adjustable to height of sweeper—reduces fatigue and strain. Speed Sweep brushes are built to outlast ordinary brushes 3 to 1.

FULLY GUARANTEED

Since Pearl Harbor Speed Sweep brushes have proved their superiority in many thousands of factories under varied conditions. They are unconditionally guaranteed to meet your requirements. Prompt shipment on AA-5 or higher priority rating. Write for styles, sizes, and prices today.







*America's
Most Versatile
Drink*

**100 PROOF
LIQUEUR**

*There's
Only One*

**SOUTHERN
COMFORT**

The Grand Old Drink of the South

SOUTHERN COMFORT CORP. ST. LOUIS, MO.



FOR A HIGH SCORE IN SOVIET OIL

In Soviet Russia's new Five-Year Plan, expansion of the oil industry high on the agenda (BW—Aug. 25 '45, p. 115). In the rich Baku oil fields workers (above) study their scores in a production-stimulating contest device to help the Soviet put oil output in step with its expanding economy.

pressure of wartime necessity, have revealed that chronological age is no more an accurate index to physical age than it is to mental age. An increasingly wide section of industrial management has come to know it too.

Wartime experience has broken down at least the psychological barrier to the regular employment of older workers. In the competition for jobs now beginning, the over-40 worker can look forward to being appraised on his merits as never before.

• **Fewer Interested**—While the older workers left in the labor market can expect less discrimination against them, industry can expect a sharp decrease in the number of older workers interested in competing for available jobs.

As early as the close of 1942, 600,000 workers eligible to receive benefits under the old-age pension system were not claiming their payments because of being employed in covered employment. An undetermined additional number took their benefits while they worked in employment not covered by the law. Further, by the end of 1943, benefits were in suspension for approximately 114,000 dependent beneficiaries because they, or the persons whose wage records constituted the basis of their benefits, were at work in covered employment.

The trend continued in 1944 and 1945. In 1944, only 326,000 applied for old-age assistance—less than half the

number who applied in 1940. It was given were (1) increased employment, (2) increased retirement and disability benefits, and (3) substantial increases in men's dependency payments.

• **Dropping Off**—In addition to the number holding unclaimed equipment under the insurance system, more than 2,000,000 persons were receiving assistance under the Social Security Act at the end of 1944. This represented a reduction of 83,404 persons, or 4% from the number of recipients in December of the previous year. The cause is of considerable significance—because the number of the population 65 years of age or over increases by approximately 200,000 a year and government estimates are of an increase of old-age assistance amounting to 50,000 a year.

The fewer and fewer persons who were eligible for old-age aid of all kinds—eligibility is lost for as long as a worker is employed in covered employment when he is over the retirement age—is a development flowing directly from the war and the economic and social incentives it provided. With the incentives inoperative and the labor market returned to its normal competitive state, a substantial number of persons are retiring. Private pension plans will ease out another sizable number of them.

• **From 65 to 60?**—By lowering the Social Security retirement age to

THIS IS DITTO



THIS IS WHAT DITTO DOES

1. Ditto copies direct from your original writing, typing or drawing, one to four colors in one operation—no stencil, no mats.
2. With Ditto, two or more originals can be made at one time, and copies made independently from each.
3. With Ditto, the same original may be used over and over again at different times, in different places.
4. Ditto makes copies on papers ranging from thin tissue to heavy cardboard.
5. Ditto makes copies of all or any desired part of your original writing.
6. With Ditto, data may be written at one place, copies made at another.
7. With Ditto, data may be recorded as accumulated, and copies made when completed.
8. Ditto requires less make-ready than any other duplicating method.
9. Ditto copies are photographically accurate—errors are impossible.

Write for Ditto Systems Samples today.

DITTO, Inc., 638 South Oakley Blvd., Chicago 12, Illinois

In Canada: Ditto of Canada, Ltd., Toronto, Ont.

**PAY ROLL
PURCHASING
PRODUCTION
ORDER-BILLING**

DITTO

Business Systems

TRADE-MARK REG. U.S. & PAT. OFF.

WAR BONDS AND STAMPS



Leo McCarey
PRODUCER AND DIRECTOR OF
"BELLS OF ST. MARY'S"
AN RKO RELEASE

"HOW TO MAKE Finer Home Movies"

by Leo McCarey, Famous Hollywood Producer and Director

"WE'VE learned in the studios that it takes fine equipment to make fine movies. In personal movies as in professional movies, the pictures can be no better than the camera.

"Ever since the industry began we've looked to Bell & Howell for fine studio equipment. And we find the same perfection in B&H Filmo Cameras for personal movie making."

Filmos are so easy to use that even beginners get superior results, right from the first. Just sight, press a button, and *what you see, you get*—in full, natural color or in sparkling black-and-white.



TAKE THIS FIRST STEP NOW. Send the coupon today for information on Filmos to be available when our war production permits. Bell & Howell Company, Chicago; New York; Hollywood; Washington, D. C.; London.

There's a Filmo Camera Exactly Scaled to You

Shown here is the improved Filmo "Sportster," an 8mm. all-purpose home movie camera. Mr. McCarey's camera is a Filmo Auto Load, which uses pre-loaded 16mm. film magazines.

BELL & HOWELL COMPANY
7116 McCormick Road, Chicago 48
Please send information about
Filmo Movie Cameras and Filmo-
sound and Silent Projectors.

Name

Address

City State **BW 8-1-48**

OPTI-ONICS—products combining the sciences of
OPTICS • electRONICS • mechanICS

PRECISION, MADE BY



Bell & Howell

SINCE 1907 THE LARGEST MANUFACTURER OF PRECISION EQUIPMENT FOR
MOTION PICTURE STUDIOS OF HOLLYWOOD AND THE WORLD

development confidently expected government officials—a million half more will become eligible for pension benefits and the number of job seekers in the older worker would be pared still further.

J.&J. JOB IDEA WORKS

The 750 employees of the Chicago Division of Johnson & Johnson who were notified on Aug. 13 they were without jobs (BW-July 45,p94) had by this week received nearly 1,400 job offers as a result of their employer's efforts.

Johnson & Johnson mailed a brochure and placed display ads in newspapers addressed to "All Chicago employers and company executives concerned with making profits." The persuasive message pointed out that the company was forced to lay off employees because of the "cream of the crop" in the local labor market. It noted that employees have been awarded Army-Navy "E's" for outstanding production achievement; that their over record was only 5.61%; that absentee rate ran at the well-below average rate of 4.37%; that they had an unusual safety record; and that "the efficiency of their work has enabled the company to make gas masks at a cost less than any other American manufacturer."

J.&J.'s blanket recommendation to its 750 employees has been effective enough to get each one of them a job offer.

SPAT AT WILLOW RUN

A jurisdictional fight between Auto building tradesmen and maintenance workers in C.I.O.'s United Auto Workers flared last week at the Willow plant, formerly occupied by the General Motors Co. for its bomber production.

It was the first instance of jurisdictional fighting in the Detroit area since the agreement between the two unions in July (BW-July 7'45,p106). Under this plan all jurisdictional outbreaks of the reconversion program are to be referred to a carefully planned arbitration machinery set up by the two unions.

Ed Thal, secretary of the Detroit Building Trades Council, said that C.I.O. maintenance workers charged A.F.L. men from the plant. They engaged in dismantling machinery. Brendan Sexton, president of U.A.W. Local 50, denied that there had been any violence.

The dispute is over which union should engage in tasks of machinery installation and removal. The question is being argued in a series of conferences.

THE INTERNATIONAL OUTLOOK

BUSINESS WEEK

SEPTEMBER 1, 1945



In the first instalment of the British Labor Party's five-year economic program (BW—Aug. 4 '45, p15), only coal mines and the Bank of England were marked for nationalization.

It may be at least a year before the government turns to transport, and several years before it tackles the multifarious iron and steel industry and brings gas and electricity under a National Fuel & Power Corp.

Legislation is expected in October giving the Bank of England a new charter as a public corporation. Government control is not likely to be more stringent than during the war, and Lord Catto will remain as governor. And in general, retention of Lord Keynes as chief Treasury adviser to the bank indicates a continuity in bank policy.

Transformation of the coal industry, long a sore spot in the British economy, will be more extensive. Britain's 1,900 mines operated by 1,135 coal companies are to come under a National Coal Board, with regional departments, in charge of production and distribution. Compensation to owners is likely to be in the form of shares in the new coal board. Chances are the government will pick personnel for the board from the collieries, which means that present management will not be completely displaced.

Other items on the Labor government's program include:

- (1) Repeal of the Trades Disputes & Trade Unions Act (1927) which will mean that sympathetic—and, therefore, general—strikes are legal and that trade unions can levy upon members for Labor Party contributions;
- (2) Implementation of the coalition government's education bill;
- (3) Immediate inauguration of a national health service and, after the new year, establishment of a complete social security system;
- (4) Unification of internal air transport (along lines which have not yet been fully agreed upon by the government).

Termination of lend-lease (page 113) poses a number of difficult economic problems, some of them only indirectly linked with the war-aid program:

- (1) There is the whole question of Britain's balance-of-payment position, and of how far, and in what way, the United States is prepared to assist in its solution to assure world security and economic stability (page 120).
- (2) There is settlement of lend-lease—final accounting of lend-lease transfers, crediting of reverse lend-lease (which in a few cases exceeded lend-lease aid), liquidation of overseas stockpiles of lend-lease equipment.
- (3) And finally, determination of how commitments by lend-lease recipients to cooperate in world economic development, through elimination of trade restrictions (prescribed in the Master Lend-Lease Agreements), will be implemented in a forthcoming world trade conference.

A threat to U. S. book and magazine publishers is shaping up in Argentina.

The local chamber of book publishers in Buenos Aires, the Camara del Libro, is drafting a decree-law for submission to congress requiring future publishing companies to be composed 100% of Argentine capital.

While this move is directed in part against refugee European publishers who have established efficient and lucrative enterprises in Argentina in recent years, it would stymie embryonic postwar plans of American and British publishers to engage in collaborative undertakings in Argentina.

There has been increased interest in setting up such projects in Latin



"HOW TO MAKE

Finer Home Movies"

by Leo McCarey, Famous Hollywood Producer and Director

"WE'VE learned in the studios that it takes fine equipment to make fine movies. In personal movies as in professional movies, the pictures can be no better than the camera.

"Ever since the industry began we've looked to Bell & Howell for fine studio equipment. And we find the same perfection in B&H Filmo Cameras for personal movie making."

Filmos are so easy to use that even beginners get superior results, right from the first. Just sight, press a button, and *what you see, you get*—in full, natural color or in sparkling black-and-white.



TAKE THIS FIRST STEP NOW. Send the coupon today for information on Filmos to be available when our war production permits. Bell & Howell Company, Chicago; New York; Hollywood; Washington, D. C.; London.

There's a Filmo Camera Exactly Suited to You

Shown here is the improved Filmo "Sportster," an 8mm. all-purpose home movie camera. Mr. McCarey's camera is a Filmo Auto Load, which uses pre-loaded 16mm. film magazines.

BELL & HOWELL COMPANY
7116 McCormick Road, Chicago 45
Please send information about
Filmo Movie Cameras and Filmo-
sound and Silent Projectors.

Name _____
Address _____
City _____ State _____
BW 8-1-45

OPTI-ONICS—products combining the sciences of
Optics • electONics • mechanICS

PRECISION MADE BY



Bell & Howell

SINCE 1907 THE LARGEST MANUFACTURER OF PRECISION EQUIPMENT FOR
MOTION PICTURE STUDIOS OF HOLLYWOOD AND THE WORLD

J.&J. JOB IDEA WORKS

The 750 employees of the Gas Mask Division of Johnson & Johnson in Chicago who were notified on Aug. 15 that they were without jobs (BW—Aug. '45,p94) had by this week received nearly 1,400 job offers as a result of their employer's efforts.

Johnson & Johnson mailed a brochure and placed display ads in local newspapers addressed to "All Chicago employers and company executives concerned with making profits." J.&J.'s persuasive message pointed out that the company was forced to lay off employees who were the "cream of the crop" in the local labor market. It noted that the employees have been awarded the Army-Navy "E's" for outstanding production achievement; that their turnover record was only 5.61%; that the absentee rate ran at the well-below-average rate of 4.37%; that they have an unusual safety record; and that "the efficiency of their work has enabled the company to make gas masks at a lower cost than any other American manufacturer."

J.&J.'s blanket recommendation that its 750 employees has been effective enough to get each one of them a new job offers.

SPAT AT WILLOW RUN

A jurisdictional fight between A.F.L. building tradesmen and maintenance workers in C.I.O.'s United Auto Workers flared last week at the Willow Run plant, formerly occupied by the Ford Motor Co. for its bomber production.

It was the first instance of jurisdictional fighting in the Detroit area since the agreement between the two unions in July (BW—Jul.7'45,p106). Under this plan all jurisdictional outbreaks during the reconversion program are to be referred to a carefully planned adjudication machinery set up by the two unions.

Ed Thal, secretary of the Detroit Building Trades Council, said that the C.I.O. maintenance workers chased A.F.L. men from the plant. They were engaged in dismantling machinery. Brendan Sexton, president of U.A.W. Local 50, denied that there had been any violence.

The dispute is over which union should engage in tasks of machinery installation and removal. The question is being argued in a series of conferences.



were marked for nationalization.

It may be at least a year before the government turns to transport, and several years before it tackles the multifarious iron and steel industry and brings gas and electricity under a National Fuel & Power Corp.

Legislation is expected in October giving the Bank of England a new charter as a public corporation. Government control is not likely to be more stringent than during the war, and Lord Catto will remain as governor. And in general, retention of Lord Keynes as chief Treasury adviser to the bank indicates a continuity in bank policy.

Transformation of the coal industry, long a sore spot in the British economy, will be more extensive. Britain's 1,900 mines operated by 1,135 coal companies are to come under a National Coal Board, with regional departments, in charge of production and distribution. Compensation to owners is likely to be in the form of shares in the new coal board. Chances are the government will pick personnel for the board from the collieries, which means that present management will not be completely displaced.

Other items on the Labor government's program include:

- (1) Repeal of the **Trades Disputes & Trade Unions Act (1927)** which will mean that sympathetic—and, therefore, general—strikes are legal and that trade unions can levy upon members for Labor Party contributions;
- (2) Implementation of the coalition government's **education bill**;
- (3) Immediate inauguration of a **national health service** and, after the new year, establishment of a complete **social security system**;
- (4) **Unification of internal air transport** (along lines which have not yet been fully agreed upon by the government).

Termination of lend-lease (page 113) poses a number of difficult economic problems, some of them only indirectly linked with the war-aid program:

- (1) There is the whole question of Britain's balance-of-payment position, and of how far, and in what way, the United States is prepared to assist in its solution to assure world security and economic stability (page 120).
- (2) There is settlement of lend-lease—final accounting of lend-lease transfers, crediting of reverse lend-lease (which in a few cases exceeded lend-lease aid), liquidation of overseas stockpiles of lend-lease equipment.
- (3) And finally, determination of how commitments by lend-lease recipients to cooperate in world economic development, through elimination of trade restrictions (prescribed in the Master Lend-Lease Agreements), will be implemented in a forthcoming world trade conference.

A threat to U. S. book and magazine publishers is shaping up in Argentina.

The local chamber of book publishers in Buenos Aires, the Camara del Libro, is drafting a decree-law for submission to congress requiring future publishing companies to be composed 100% of Argentine capital.

While this move is directed in part against refugee European publishers who have established efficient and lucrative enterprises in Argentina in recent years, it would stymie embryonic postwar plans of American and British publishers to engage in collaborative undertakings in Argentina.

There has been increased interest in setting up such projects in Latin

THE INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK
SEPTEMBER 1, 1945

America recently. Both Penguin Books, Inc., and Pocket Books, Inc., have recently surveyed the market. This month Bernard G. Davis of Ziff-Davis Publishing Co. spent two weeks in Buenos Aires talking book-translation rights and Spanish magazine publishing possibilities.

If the Camara decree-law is approved, it would not only wreck these plans but also set up a pattern of interference with foreign enterprise that might extend beyond Argentina to other promising trade areas in Latin America.

Because the Foreign Economic Administration, in its buying through Metals Reserve Co., long ago put foreign contracts on a month-to-month basis, tapering off of overseas metal buying won't be much of a problem.

So far as concerns Bolivia, where a stoppage of tin purchases would seriously hurt the economy, continuing high demand for the metal will probably avert trouble. Eventually, adjustment will have to be made to bring Bolivian prices into line with world prices, probably as soon as Far Eastern sources become available.

Likewise, arrangements will have to be made to stockpile Chilean copper—either here on a government basis, or there on a private or government basis—until an anticipated temporary lag in demand is succeeded by increased sales as world markets reopen (BW—Aug.25'45,p10).

So far as other foreign critical materials are concerned, some marginal producers have already been cut off from U. S. government wartime bonuses. The remainder face the difficult task of bringing war-inflated prices into line with what private buyers here and elsewhere will pay.

London reports that the Labor government is seriously considering reopening discussions with Moscow on a long-term credit to the Soviet Union for purchase of British industrial equipment. Churchill's coalition government turned thumbs down on this project months ago.

Don't overlook the possibility that, if Britain is unable to obtain favorable credit arrangements in the United States, London may consider it necessary to hold rigidly to the sterling bloc system (BW—Jul.7'45,p113) and try to reach a barter trading agreement with the U.S.S.R.—an agreement which would cover most of continental Europe.

The outcome of impending talks between Generalissimo Chiang Kai-shek and Mao Tse-tung, delegate from Communist China, will be a clew to the meaning of the Sino-Soviet pacts announced earlier this week.

A settlement of differences between Chungking and the Communists may mean (1) that Moscow's apparent abandonment of the Communists was accompanied by instructions that they collaborate with Chiang, or (2) that Chungking agreed to arrive at terms acceptable to the Communists in order to obtain the return of Manchuria and a promise from Moscow not to interfere in China's internal affairs.

If the Communists agree to disband their armies—or turn them over to Chungking control—it will indicate Moscow's abandonment of its support of their efforts to obtain autonomy in a federative China.

The U. S., through our ambassador, Maj. Gen. Patrick J. Hurley, has been using its good offices to bring Chungking and the Communists together. If the outcome is a liberalized coalition government, more rapid reconstruction—and increased opportunities for investment and trade—will result.

BUSINESS ABROAD

Away From Lend-Lease

Though one chapter has closed, new formulas (already provided for) enable recipient nations to obtain continued flow of goods. Aid extended may be U. S. trump at world trade conference.

Announcement last week of the termination of lend-lease closed a unique chapter in the history of American economic relations with the rest of the world. In four years, the United States had poured more than \$40,000,000,000 in munitions, machinery, foods, and services into the hands of Allied armies and civilian workers to speed a military victory.

Dying Since V-E Day—Lend-lease is really dead. It had been dying since V-E Day. Victory in Europe brought sharp cutbacks in shipments and all procurement programs were immediately brought under study with a view to reducing further commitments.

Nevertheless, legal burial of lend-lease has not fully ended its operations. T. Crowley, Foreign Economic Administrator, immediately offered recipient countries alternative means of obtaining a continued flow of goods.

And, the three latest-comers to the lend-lease fold—France, Belgium, and Netherlands—had already made in-

terim arrangements to obtain needed items.

• **Russian Aspect**—The Soviet Union, which was negotiating a special cash-and-credit interim pact as long ago as last February, was cut off from all but a few special categories of military items after V-E Day. Moscow is interested in a long-term loan of substantial size to finance purchases of long-range rehabilitation equipment. This is likely to be available only after special action by Congress, and lengthy discussion of terms. But even pending this, a \$1,000,000,000 slice of the Export-Import Bank kitty is said to be available to the U.S.S.R.

This week negotiations were proceeding satisfactorily with a half-dozen other countries seeking Export-Import Bank loans of varying size, but sufficient in the aggregate nearly to exhaust the recently expanded (from \$700,000,000 to \$3,500,000,000) credit of the bank.

• **Britain's Problem**—The United Kingdom presents a special case—in both the

nature and the magnitude of its problem (page 111). Lord Keynes, junketing British financial negotiator, is due in Washington this week—not only to discuss lend-lease termination and immediate measures to ameliorate the repercussions, but to confer with the highest American authorities on the involved and delicate aspects of Britain's postwar economic plight.

Britain, too, may be able to squeeze a \$1,000,000,000 loan out of the Export-Import Bank before its funds are fully committed. This would leave prospective loans to principal Allies on this order of magnitude:

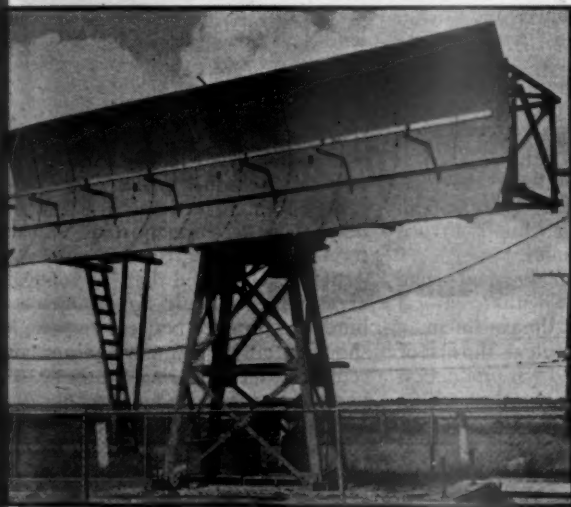
United Kingdom.....	\$1,000,000,000
Soviet Union.....	1,000,000,000
France.....	450,000,000
Belgium.....	125,000,000
Netherlands.....	115,000,000

But not all lend-lease recipients were similarly affected by the cut-off.

• **On the Comfortable Side**—Most Latin-American countries (and a few others, such as Iran) salted away comfortable dollar balances (and other foreign exchange credits) during the war, and will be in no immediate need of financial aid on a scale that cannot be met by private interests.

When President Truman called for the end of lend-lease, in accordance with the law and his promise to Congress, about \$2,000,000,000 in lend-lease funds were tied up in contracts for goods and about \$1,500,000,000 either in overseas stockpiles, or in the supply pipelines.

• **Crowley's Program**—However, to provide aid to liberated countries, to liqui-



COMMERCIAL RADAR FOR CANADA

Canada this week appeared to have stolen a march on the United States in the application of radar (BW—Aug. 18, p. 63) to commercial airline operation. Trans-Canada Lines has borrowed radar equipment from the Royal Canadian Air Force and installed it at Winnipeg. It is



being used to detect aircraft at distances up to 80 miles, guide them to the field, and control traffic in the landing area. Radar antenna (left) is used in locating plane, whose position is recorded on "scope" (right). In the U. S., the Civil Aeronautics Administration obtained ten carloads of equipment several months ago to begin experimental work, with no results as yet announced.



COCOON HARVEST FOR ITALY'S SILK LOOMS

A couple of British fliers lend a hand in the cocoon harvest, to speed Italy's silk industry back to its prewar importance. Whether the silk is exported or turned into finery in Italian mills, its production provides employment and its sales abroad will help to pay for badly needed imports.

date some of the lend-lease stockpiles, and to cushion the effect of abrupt contract cancellation in this country, the Foreign Economic Administrator offered a six-point program to former lend-lease recipients.

In essence, it provided for postponing the final stoppage of exports to lend-lease countries until V-J Day; that the facilities of FEA and the War Shipping Administration be made available (for 90 and 30 days, respectively) to procure and transport goods until buying and shipping facilities of their own are set up by our Allies; and for continued procurement for cash, or credit.

• **Decline Had Set In**—Actually, the decline in lend-lease had set in much earlier. The rate of export in the first quarter of this year was only about two-thirds the rate of a year earlier. And, with munitions regularly comprising about 50% of lend-lease transfers, the decline was bound to be sharpened by the end of hostilities in Europe.

Britain, for instance, received over \$5,000,000,000 in lend-lease last year. In the year following V-E Day, the anticipated length of the Pacific war, lend-lease was to involve only \$2,200,000,000, of which food was expected to account for 40% to 50%.

• **In a Different Form**—As soon as the end of the war was in sight, new lend-lease pacts were written in a different form, and old pacts were rewritten, to prepare for the expected cut-off of war aid. France, Belgium, and the Nether-

lands—of all the countries invited to take advantage of the new formula (including Britain and Russia)—were the only nations fully prepared when the President's announcement came.

In the last annual renewal of the Lend-Lease Act, provision was made in section 3-c for writing lend-lease contracts to make them convertible to cash and credit terms. Thus, when France signed up for lend-lease on Feb. 28, 1945, it signed a Master Lend-Lease Agreement, a Reciprocal Aid Agreement, and an agreement under section 3-c of the Lend-Lease Act.

• **What France Gets**—Under the first, similar to those signed with Britain, China, and the Soviet Union, France obtained aid for its armies.

Under the second, arrangements were made to credit France with reciprocal aid to Allied armies on the continent.

Under the third agreement, the first of its kind, France obtained war production materials and supplies worth \$2,575,000,000. Of this total, \$1,675,000,000 consisted of raw materials for war use and essential civilian supply, food, petroleum supplies, short-life manufacturing equipment for war production, funds for ship chartering.

• **Capital Goods**—The remaining \$900,000,000 consisted of long-lived capital goods, deemed essential to the war effort but far outlasting the war emergency—including locomotives and freight cars, ships, and machine tools and other industrial equipment.

Both types of materials were to be supplied under lend-lease until the war ended and invalidated the act. At that time, by the agreement, France is committed to pay for the goods it has contracted for or to pay the U. S. for contract settlement. The terms differ according to the category of goods involved. On short-lived items, the undelivered portion is to be paid for over 30 years at 2½% interest. On the long-lived capital goods, a 20% down payment must be made, and the remainder is to be settled over a 30-year period at an identical interest rate.

• **How It Adds Up**—This week it appeared that France has a lien on about \$650,000,000 of undelivered goods available to it under the lend-lease pact. Any new purchases would have to be paid for in cash, or through an Export-Import Bank loan.

The Netherlands and Belgium, with similar pacts (which originally involve \$242,000,000 and \$325,000,000 respectively), were in the same boat, with some contracts outstanding on which they could accept delivery and pay over a 30-year period. Both are negotiating for an Export-Import Bank loan.

• **An Accounting Requested**—So far settlement of lend-lease accounts is in the air. With the end of the act's operations, Washington has requested an accounting from all countries which received aid, in order to determine how much is recoverable.

Termination of the agreements automatically canceled reciprocal aid. This means that credits for aid to U. S. forces abroad can no longer be applied against lend-lease receipts, and hence that the U. S. must now begin paying cash for maintenance of its overseas forces at establishments in Britain, France, and the Far East.

• **Repayment?**—Although little has been said on the subject, the possibility of cash repayment of lend-lease has never been seriously contemplated. The Master Lend-Lease Agreement, instead, Article VII directed that the condition of settlement should not be such as to burden commerce between nations, but should promote mutually advantageous economic relations and the betterment of world-wide economic relations. In addition, it provided for international collaboration to raise world levels of employment and production, and for efforts to eliminate discriminatory treatment in international commerce.

It has often been predicted that this will be Washington's weapon at the international conference on world trade scheduled for later this year or early 1946. Recent events would tend to substantiate this view.

• **Special Cases**—A number of countries which received lend-lease under special

Here's where your soldier goes when he comes home from Europe



THERE ARE 22 personnel reception stations in the United States. A returning soldier is sent to the one nearest his home. If he is to

be released from service, this is where he gets his discharge. If he is to stay in service, this is where he starts his furlough home.

Here's how your soldier goes across America

The little black trains on the map show the trips taken by a typical soldier returning from Europe.

First, there is the short trip (1) from the port at which he landed to a nearby disposition center. Here, he is grouped with other men from the same part of the country and sent (2) to the reception station nearest his home.

If he is discharged, he takes trip (3) home. If he must remain in service, he starts his furlough with trip (3) then, when it is over, takes trip (4) back to

the reception station where he is re-assigned.

Men redeployed go first to an assembly station (5) for supplemental training, then (6) to their new assignment. Every returning soldier makes at least three trips by train. Men redeployed make at least six trips, maybe more.

That's why the military load on trains before V-J Day was the heaviest in history. Now with over 10,000 men a day landing from Europe, and thousands of veterans returning from the Pacific, the

railroads' job will be greater than ever. And, since most troops making long trips under orders travel in Pullman comfort, you can't count on getting the Pullman space you want exactly when you want it.

But you can count on this: when you do go Pullman, you go the world's safest, most comfortable way of getting there fast.

That will be just as true tomorrow as it is today!

PULLMAN

For more than 80 years, the greatest name in passenger transportation

© 1945, THE PULLMAN COMPANY



LIKE THE FAMOUS

Smith Family

THE Smiths are a great family. Members of it have become famous as doctors, lawyers, merchants and chiefs.

But you wouldn't hire a man just because his name was Smith. You'd still want to know his age, experience and a few other pertinent facts.

The Plastics family is like the Smith family. It has some remarkable members as well as some good, everyday individuals for common, everyday jobs.

To choose the right Plastics for your job, come to an authority who knows the family tree and has the record of its individual members in terms of tested performance.



Plastics Division
RIE RESISTOR CORP.
ERIE, PA.

arrangements without signing the Master Agreement have recently been brought to heel. The list includes Egypt, Turkey, Iran, Iraq, and India—even though some of these countries have actually paid cash for lend-lease goods. Brazil, too, is paying cash, but signed the agreement in 1942. Negotiations with other countries were under way, when the war ended, to widen as far as possible the international application of Article VII.

CANADA

Tax Hopes Slim

Canadian business expects some modification of levies but government warns of need for high level of income.

OTTAWA—Problems of business reconversion and budgetary adjustments necessitated by the end of war loom largest among the items which will confront the new Parliament when it meets next week.

• **Tax Revision Expected**—When Finance Minister J. L. Ilsley submits his budget—now being rewritten—some modification in taxes will be announced.

While business insists that if tax levies remain high, reconversion will be slowed and the road to full employment and high national income strewn with obstacles, the government is equally insistent upon maintaining a high level of federal revenue with which to finance promised aids to industry and exports, as well as expanded social security measures.

• **Disappointment Ahead**—Optimistic predictions are for complete removal of the excess-profits tax, substantial lowering of the corporation tax, and moderate reductions in sales and personal income levies.

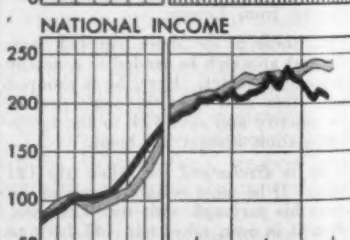
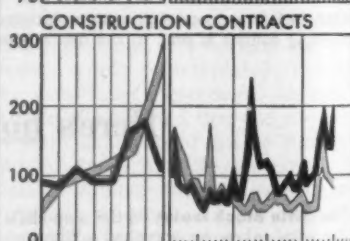
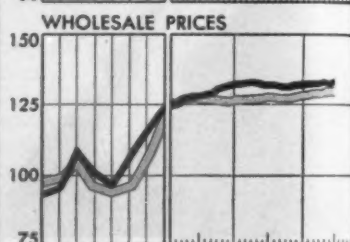
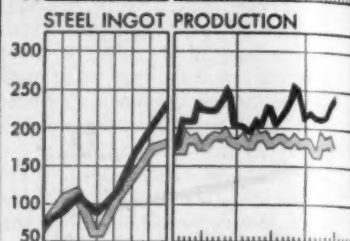
Ilsley, however, served notice last week in response to proposals by a Canadian labor delegation that income tax exemptions be raised considerably, that the budget will be disappointing in its tax-reduction features. He said the public could not have social security and low taxes at the same time. Although tax reductions were talked about a few months ago—around election time—officials are now realistically pointing to the rising costs of government services.

• **Price, Wage Curbs Stay**—On the reconversion front, progress continues. While production controls have been largely lifted, and manpower controls

TREND OF BUSINESS CANADA AND U.S.A.

1935-39=100

CANADA — U.S.A.



BUSINESS WEEK • Sept. 1, 1945

NESS
U.S.A.
U.S.
MENT
S
1945
NESS WEEK

being removed in stages, price and wage controls are to stay until competition—with improved supply—becomes a factor in limiting prices.

The process of removing bars on output began long before the war's end, and has been speeded up. Net result is that only 64 of some 300 production controls imposed by the Wartime Prices Trade Board remain. Most of these are speed-up orders on essentials rather than bans on nonessentials.

Despite the long headstart on reconversion planning, the end of the Pacific war has not been without its implications. For example, the contract termination picture was confused with work on some U.S. and British contracts continuing in the absence of termination orders from Washington and London.

Mutual Aid Continues—Canada's Mutual Aid—rough equivalent to lend-lease—stumbled on without a plan. In fact, the picture may remain confused for some time. The decision has been reached not to halt shipments of goods in order, although the clear intention of the Mutual Aid Act is that it should end with the close of hostilities. Nevertheless, the administration has decided to let shipments continue and settle problems of payment later.

May Boost Export Loans—As far as post-Mutual Aid payments are concerned, Canada's problem again duplicates that of the United States (page 3). There is some question whether any of its war customers have the cash to take over Mutual Aid commitments, and the lending power of Canada's Export Credits Insurance Act now appears to be far short of potential needs.

The government intends to ask Parliament for a substantial expansion of the agency's lending ability—now set at \$200,000,000 and fully committed (W—Aug. 4'45, p116)—in order to help needy European countries and to hold up Canadian exports. The question of financial aid to Britain is also open for action, and Parliament must decide whether it is to be handled under the Export Credits Insurance Act or separately.

Guarded Confidence—In the midst of these imponderables, guarded governmental confidence in the economic outlook is based on several factors:

(1) A large backlog of jobs in civilian industry, despite war layoffs and demobilization at the rate of 33,000 a month since June.

(2) Measurable improvement in the supply of raw materials, which has made procurement of materials controls easier and promises to speed reconversion.

(3) Heavy demand for industrial building space, which so far outstrips surplus war plant offerings.

ADVERTISERS IN THIS ISSUE

Business Week—September 1, 1945

ACE MFG. CORP.....	8	KELLETT AIRCRAFT CORP.....	47
Agency—Gray & Rogers		Agency—Fuller & Smith & Ross Inc.	
ACME STEEL CO.....	53	KEYSTONE STEEL & WIRE CO.....	24
Agency—Fullon, Morrissey Co.		Agency—Mace Adv. Agency, Inc.	
AETNA LIFE INSURANCE CO.....	26	WALTER KIDDE & CO.....	45
Agency—Fuller & Smith & Ross Inc.		Agency—Newell-Emmett Co.	
AIR-MAZE CORP.....	70	KIDDER, PEABODY & CO.....	77
Agency—Fuller & Smith & Ross Inc.		Agency—Doremus & Co.	
AMERICAN CHAIN & CABLE CO., INC.....	31	KOPPERS CO.....	4th Cover
Agency—Bellocke-Ella-Younggreen & Finn, Inc.		Agency—Ketchum, MacLeod & Grove, Inc.	
AMERICAN MAGNESIUM CO.....	43	THE MALL TOOL CO.....	38
Agency—Fuller & Smith & Ross Inc.		Agency—Chas. Elwyn Hayes, Adv.	
AMERICAN OPTICAL CO.....	25	MANNING, MAXWELL AND MOORE, INC.....	64
Agency—Sutherland-Abbott		Agency—Briggs & Varley, Inc.	
AMERICAN PHOTOCOPY EQUIPMENT CO.....	46	THE MASTER ELECTRIC CO.....	92
Agency—Arthur Meyerhoff & Co.		Agency—Superior Advertising, Inc.	
ASSOCIATION OF AMERICAN RAILROADS.....	56	McGRAW-HILL BOOK CO., INC.....	93
Agency—Arthur Kudner, Inc.		THE MERIAM INSTRUMENT CO.....	118
ATLAS POWDER CO.....	56	Agency—The Bayless-Kerr Co.	
Agency—The Atkins-Kennett Co.		MILWAUKEE DUSTLESS BRUSH CO.....	106
BAKER INDUSTRIAL TRUCK DIV. THE BAKER RAULAND CO.....	75	Agency—Barnes Adv. Agency, Inc.	
Agency—G. M. Basford Co.		MONSANTO CHEMICAL CO.....	36
BANK OF THE MANHATTAN CO.....	95	Agency—Gardner Advertising Co.	
Agency—Kenyon & Eckhardt, Inc.		NATIONAL CASH REGISTER CO.....	67
BELL & HOWELL CO.....	100	Agency—McCann-Erickson, Inc.	
Agency—Henri, Hurst & McDonald, Inc.		NATIONAL CITY BANK OF CLEVELAND.....	78
BRODERICK & BASCOM ROPE CO.....	2	Agency—McCann-Erickson, Inc.	
Agency—Watts Adv. Agency		OWENS-CORNING FIBERGLAS CORP.....	81
BUELL ENGINEERING CO., INC.....	74	Agency—Fuller & Smith & Ross Inc.	
Agency—Tracy, Kent & Co., Inc.		PARSONS PAPER CO.....	98
BUFFALO FORGE CO.....	44	Agency—Wilson & Haight, Inc.	
Agency—Melvin F. Hall Adv. Agency, Inc.		PITTSBURGH PLATE GLASS CO.....	29
BURROUGHS ADDING MACHINE CO.....	23	Agency—Maxon, Inc.	
Agency—Campbell-Ewald Co., Inc.		PLYMOUTH CORDAGE CO.....	73
THE CARPENTER STEEL CO.....	69	Agency—Fuller & Smith & Ross Inc.	
Agency—Boumont, Heller & Spertling, Inc.		POLLAK MFG. CO.....	37
CHAMBERSBURG ENGINEERING CO.....	86	Agency—Campbell-Ewald Co., Inc. Eastern Div.	
Agency—Willard G. Myers Adv. Agency		PRESSED STEEL TANK CO.....	89
CHESAPEAKE & OHIO LINES.....	33	Agency—The Buchen Co.	
Agency—Kenyon & Eckhardt, Inc.		PRUDENTIAL INSURANCE CO. OF AMERICA.....	38
CHRYSLER CORP.....	118	Agency—Cecil & Presbrey, Inc.	
Agency—Doremus & Co.		THE PULLMAN CO.....	115
C. P. CLARE & CO.....	48	Agency—Young & Rubicam, Inc.	
Agency—Hamilton Adv. Agency		RADIO CORPORATION OF AMERICA.....	27
THE COLSON CORP.....	91	Agency—J. Walter Thompson Co.	
Agency—Meermans, Inc.		THE RAULAND CORP.....	100
CONTINENTAL CAN CO., INC.....	12	Agency—Ray D. Zeff & Assoc.	
Agency—Batten, Barton, Durstine & Osborn, Inc.		REMINGTON RAND, INC.....	97
COOK ELECTRIC CO.....	119	Agency—Addison Vars, Inc.	
Agency—Technographics, Inc. Adv.		REMINGTON RAND, INC.....	72
R. C. COXHEAD CORP.....	68	Agency—Lefford Adv. Agency, Inc.	
Agency—O. S. Tyson & Co., Inc.		REYNOLDS METALS CO.....	109
HENRY DISSTON & SONS, INC.....	41	Agency—J. Walter Thompson Co.	
Agency—Gearo-Marston, Inc.		ROBBINS & MYERS SALES, INC.....	28
DITTO, INC.....	107	Agency—Erwin, Wassey & Co. Inc.	
Agency—W. W. Garrison & Co.		J. A. ROEBLING'S SONS CO.....	101
E. I. du PONT de NEMOURS & CO.....	110	Agency—Rieckard & Co., Inc.	
Agency—Batten, Barton, Durstine & Osborn, Inc.		ROXALIN FLEXIBLE FINISHERS, INC.....	49
ERIE RESISTOR CORP.....	116	Agency—J. M. Mathes, Inc.	
Agency—W. S. Hill Co., Inc.		SEABOARD RAILWAY.....	104
THE FAFNIR BEARING CO.....	3rd Cover	Agency—The Caples Co.	
FAIRCHILD ENGINE & AIRPLANE CORP.....	6	SOUTHERN COMFORT CORP.....	106
Agency—Cecil & Presbrey, Inc.		Agency—Jackson & Fishery	
FIRESTONE TIRE & RUBBER CO.....	11	SPRIESCH TOOL & MFG. CO., INC.....	26
Agency—Sweeney & James Co.		Agency—Tyler Kay Co., Inc.	
FRIDEN CALCULATING MACHINE CO.....	54	STATE OF TENNESSEE.....	52
Agency—George I. Lyun, Adv.		Agency—C. P. Clark, Inc.	
GENERAL ELECTRIC CO.....	14	TOLEDO SCALE CO.....	93
Agency—Newell-Emmett Co.		Agency—Hesson-Faller-Relchert, Inc.	
THE GLOBE-WERNICKE CO.....	90	UNION METAL MFG. CO.....	102
Agency—Ruthrauff & Ryan, Inc.		Agency—The Griswold-Eshleman Co.	
THE B. F. GOODRICH CO.....	1	U. S. ENVELOPE CO.....	88
Agency—The Griswold-Eshleman Co.		Agency—Wm. B. Remington, Inc.	
HAMMERMILL PAPER CO.....	71	U. S. FIDELITY & GUARANTY CO.....	103
Agency—Batten, Barton, Durstine & Osborn, Inc.		Agency—VanSant, Dugdale & Co., Inc.	
JOHN HANCOCK MUTUAL LIFE INS. CO.....	85	UNITED STATES RUBBER CO.....	40
Agency—McCann-Erickson, Inc.		Agency—Campbell-Ewald Co., Inc. Eastern Div.	
HEARST NEWSPAPERS.....	34, 35	VAUGHAN MOTOR CO.....	87
Agency—Podlar & Ryan, Inc.		Agency—Hous & Leland	
THE HINDE & DAUCH PAPER CO.....	80	WARNER ELECTRIC BRAKE MFG. CO.....	105
Agency—Howard Swink Adv. Agency		Agency—Klaus-Van Pletersom-Dunlap Assoc., Inc.	
HONAN-CRANE CORP.....	76	WARNER & SWASEY CO.....	2nd Cover
Agency—Bergan LaGrange Agency		Agency—The Griswold-Eshleman Co.	
HOTELS STATLER CO., INC.....	39	WASHINGTON ELECTRIC POWER COMPANIES.....	82
Agency—Young & Rubicam, Inc.		Agency—Bozelli & Jacobs	
THE INTERNATIONAL NICKEL CO., INC.....	3	WELSCH ENGR. & MGMT. CORP.....	46
Agency—Marchalk and Pratt Company		Agency—H. E. Lorekin, Corp	
KEARNEY & TRECKER.....	51	WESTINGHOUSE ELECTRIC CORP.....	38
Agency—Klaus-Van Pletersom-Dunlap Assoc., Inc.		Agency—Fuller & Smith & Ross Inc.	
KEASBEY & MATTISON CO.....	4	WILLSON PRODUCTS, INC.....	8
Agency—Gearo-Marston, Inc.		Agency—Boumont, Heller & Spertling, Inc.	
		L. J. WING MFG. CO.....	99
		Agency—Willard G. Myers Adv. Agency	

CHRYSLER
DODGE

Chrysler Corporation

DE SOTO
PLYMOUTH

NOW MAKING WAR PRODUCTS

DIVIDEND ON COMMON STOCK

The directors of Chrysler Corporation have declared a dividend of seventy-five cents (\$.75) per share on the outstanding common stock, payable September 14, 1945, to stockholders of record at the close of business August 20, 1945.

B. E. HUTCHINSON
Chairman, Finance Committee

MERIAM MANOMETERS

• These instruments are used extensively to measure accurately pressures, vacuums, and differential pressures of liquids and gases.

They have sturdy housings and Pyrex glass tubes—no levers, gears, diaphragms—and meet all requirements of industry for a permanently accurate indicating instrument.

THE MERIAM INSTRUMENT CO.

10932 Madison Avenue • Cleveland 2, Ohio
In Canada: Peacock Bros. Ltd. Montreal

SALES EDUCATOR AVAILABLE

Specialist in training salesmen. Skilled in planning and executing educational programs for beginners and for experienced salesmen, in retail and in specialty fields. Years of successful selling experience, combined with practical teaching of salesmen, enables conducting realistic courses that produce results. Adept in developing sales material and teachers. Knows how to put life into sales meetings and bulletins. Organizer, speaker, writer. Sound academic background. Veteran of World War I.

Box 459, Business Week.
68 Post Street, San Francisco 4, California

BRANCH MANAGER

An internationally known manufacturer of pumps wants a New York City branch manager. The man should be 40 to 50 years old and must have wide acquaintance among pump buyers in the New York Metropolitan area. Compensation is salary plus share of profits.

This is an important position, carrying substantial income. Please do not reply unless your record proves a thorough knowledge of pumps and you know the market. Attach photograph to your reply.

Box 460, Business Week.
520 North Michigan Ave., Chicago 11, Ill.

THE MARKETS

(FINANCE SECTION—PAGE 76)

Last week Wall Street, beginning to recover from the confusion brought on by the sudden ending of the war, finally remembered its earlier "peace is bullish" verdicts (BW—Aug. 18 '45, p. 79). The Street decided to take some time off to find out what Washington officials and industry actually had been engaged in doing on the momentous question of reconversion.

• **Burst of Enthusiasm**—What investors and traders saw, on the whole, was to their liking. And last Thursday, despite considerable disappointment over the pricing policies OPA intends to follow until reconversion is completed, they indulged in their first burst of peacetime enthusiasm by staging one of the most bullish daily trading sessions recorded at the New York Stock Exchange in some five years.

Last Thursday's enthusiasm has been followed by a string of similar exhibitions. By Wednesday of this week the Dow-Jones industrial stock price average not only had recovered all its losses in recent weeks but also had risen to a succession of new peaks not touched since September, 1937.

• **New Money in Market**—Wall Street is quite aware that short covering, as well as new money entering the market, has been responsible for the postwar period's first important stock market upsurge. Nonetheless, particularly encouraging to the Street has been the showing of the better grade and blue chip issues in the current upswing. For the first time they, rather than the low-priced group, have been leading the advance. Brokers report much of the buying has represented long-term investment of so-called "smart money."

Similarly encouraging, Wall Street's bullish elements report, is the breadth of the advance thus far scored. Buying has been widespread, not concentrated in relatively few issues, and especially noticeable have been the gains recorded in the steel, automobile, amusement, mail order, department store, rubber, and chemical sections of the stock list.

• **Some Reservations**—Rails have not been neglected in the move towards higher prices. Unlike previous occasions earlier this year, however, they have definitely lagged behind industrials, and it is clear that, despite the tremendous improvement which that industry registered during the war, many investors and traders still have some reservations concerning the railroads' outlook for peacetime prosperity.

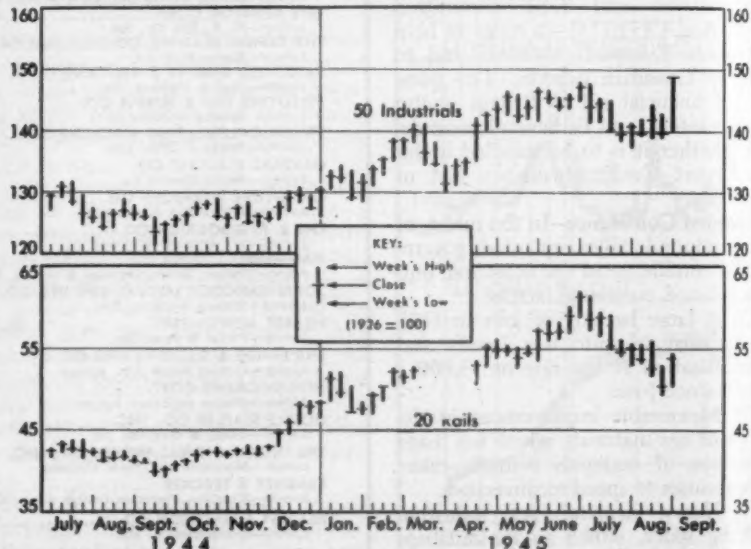
Wall Street hasn't permitted the recent rise to blind it to the fact that the coast is not yet entirely clear and that the market must demonstrate its ability to absorb a good deal of profit-taking selling. Also, many brokers expect that the rapidity and extent of the current recovery may soon bring in its train a sharp "technical reaction."

Security Price Averages

	This Week	Week Ago	Month Ago	Year Ago
Stocks				
Industrial ...	148.9	139.9	140.8	126.5
Railroad	53.9	50.5	55.1	41.2
Utility	70.2	68.5	70.7	55.8
Bonds				
Industrial ...	121.2	121.7	122.1	120.8
Railroad	114.1	113.7	115.0	106.9
Utility	115.5	115.4	115.8	116.4

Data: Standard & Poor's Corp.

COMMON STOCKS—A WEEKLY RECORD



Data: Standard & Poor's Corp.

Street's
breadth
Buying
strated in
ially no-
rdered in
nt, mail-
der, and
ist.
ave not
towards
occasions
ey have
ials, and
mendous
try regis-
stors and
ons con-
or peace

the re-
that the
that the
bility to
g selling
the ra-
recovery
a sharp

5
th Year
Ago

8 126.8
1 41.2
7 55.5

1 120.8
0 106.9
8 116.4

160

150

140

130

120

65

55

45

35

pt. 1, 19

Highest Railroad?

Whenever Business Week's front cover carries a picture of a railroad, readers besiege the editor with requests for copies of the original photograph. Whenever its news-reports add to the sum of its readers' knowledge of railroad lore, facts, and figures, subsequent letters attest to the wide interest in such information. Whenever it makes even a minor technical error in presenting abstruse railroading data, the errors are likely to reach flood tide. Now we stand corrected of such an error by friends who share a love of railroads that has survived all competition and all the doubts as to whether the home-front war was ever really as high as the purveyors of our rail travel sometimes made it seem.

The Denver & Rio Grande Western's new tunnel, 10,424 feet up, on top of Tennessee Pass in Colorado, is not "the highest bit of standard-gage railroad in the world" (BW-Jul.14'45,p36). Meaning from protests of that statement the clearest compilation of relevant facts, we take from Donald Ashton, executive assistant, Burlington Lines, the following:

"It is very probably the highest elevation reached by a standard-gage steam railroad main line in the U. S. The highest altitude now reached by a standard-gage steam railroad ["main line" omitted here] is the Colorado & Southern's 13,119 feet at Climax, Col. There's a higher standard-gage steam railroad point on the Denver & Rio Grande Western at Ibex, Colo.—11,522 feet above sea level, but this line has recently been abandoned."

For the benefit of collectors of such railroading curiosia, Mr. Ashton reminds that the Assn. of American Railroads, Transportation Bldg., Washington 6, D. C., publishes without charge a handsome "Quiz on Railroads and Railroading" that contains the answers to 100 questions about what's biggest, longest, highest, fastest, and everything else in railroading. But, as reference to Business Week's copy of this invaluable editorial aid has shown, even the A.A.R. has trouble keeping up to date. However, a new edition of the Quiz, now in the works, will take care of the abandonment of that trackage at Ibex and of the recent broad-gaging of the tracks at Climax.

Incidentally, it will also probably show that the highest standard-gage point of all is at 14,109 feet on the Manitou & Pike's Peak Railway which, ex-

cept in winter months, will take you up you-know-where or bust. But—sticklers please note—that's a standard-gage cog-wheel line, not steam, not classifiable as a standard railroad.

"Has Us Worried"

Carrying forward the discussion of Washington's ideas on depreciation which has brought frequent letters to this department, R. N. Stearns, vice-president and treasurer of Stearns Magnetic Mfg. Co. of Milwaukee, writes:

Industrial readers everywhere are intensely interested in the problem of machinery and equipment for postwar production. In this connection, the attitude of government officials on the subject of depreciation and obsolescence has us worried.

It so happens that we manufacture a line of magnetic equipment such as separators, pulleys, drums, magnets, clutches, brakes, etc. While these are not necessarily machine tools, they are considered capital investment products.

It is our opinion that the purchase and installation of new capital investment equipment will continue to be substantially curtailed in the postwar era, until the Treasury adopts a more liberal and constructive viewpoint on depreciation and obsolescence.

We believe that the government should either permit the immediate writsoff of any capital equipment purchased, or should allow the purchaser to write it off in whatever manner is preferable for absorbing its cost, over any period desired by the purchaser.

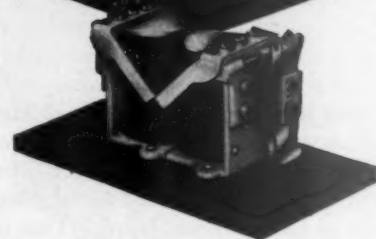
This policy, in our opinion, would substantially increase the purchase of new, efficient, modern machinery; would lower costs of production, making the products of high-cost American labor competitive with low-labor-cost foreign products, and increase the hiring of labor in the capital equipment industry.

The government would give up very little in actual tax loss, since the sooner the new equipment is written off, the greater the profit and tax in the final analysis.

Bombastic?

Local patriotism in the new city of Oak Ridge, prodigy of the atomic bomb, site of the freshly famed Manhattan Project (BW-Aug.11'45,p17), runs high and expresses itself succinctly. From that point comes an irresistible reply to Business Week's recent noncommittal publication of the picture of a Knoxville realtor's subdivision sign reading, "Knoxville—The Capitol City of Atomic Energy." The communication says simply, "Knoxville, Tenn., Is No More The Capitol of Atomic Energy Than A Pig Is. P.S.—Oak Ridge Is 18 Miles From Knoxville."

Another
GREAT STRIDE
FORWARD
in Relay
Engineering



LATCHING AEROTROLS

again prove the versatility
of the Aerotrol "400"
Series relays

Latching Aerotrols are the newest development in the Cook line of Aerotrol relays. Individual Aerotrols, since their development to meet modern aircraft requirements, have found many other applications in the electrical and electronic industry due to their easy adaptability in meeting demands for a small, rugged and accurate relay.

Among these applications have been many requests to Cook engineers for latching type Aerotrols. These requests have since been fulfilled with relays of the type illustrated above. This design now makes it possible to combine any two Aerotrols of similar or different types into a latching relay that presents all of the outstanding features of each Aerotrol. Combinations of two single pile-up relays, two double pile-up relays, a single and a double pile-up relay or Cook heavy current Aerotrols are now available.

All of the same outstanding features remain; made of the finest relay materials; craftsmanship in design and construction; spread terminals for easy wiring; space saving; and the numerous other features which are more fully described in the new Aerotrol booklet now on the press. A request on your letterhead will bring one of these booklets to you upon completion.

A Product of the Magnetronic Division of



CHICAGO 14, ILLINOIS

THE TREND

LEND-LEASE—THE FALSE AND THE REAL ISSUE

This country's announcement last week of the termination of lend-lease—and particularly the British reaction, as expressed by Winston Churchill's exclamation at "such a rough and harsh manner"—has brought us sharply face to face with one of the basic economic problems of the postwar world.

• There could have been no real question as to when lend-lease was to end. Statements by members of the executive branch had indicated several times within the last year that lend-lease was to end when the war ended. The latest came when President Truman said on signing the lend-lease extension act: "Lend-lease will be carried on until the unconditional surrender or complete defeat of Germany and Japan." That understanding was quite explicit in all the testimony and debate in Congress.

What is, perhaps, even more significant is when Senator Robert A. Taft proposed to amend that extension act to forbid even the sale of lend-lease stocks left over when the war ended; that amendment failed of success by nothing more than a tie vote in the Senate. It has always been quite clear under the lend-lease agreements that title to any unused stocks or output of goods was to revert to the U. S. upon the war's end.

Prime Minister Attlee has himself remarked: "We had not anticipated that operations under the Lend-Lease Act would continue for any length of time after the defeat of Japan, but. . . ." But what? Is it that the British will need to rush the negotiations of a new transition agreement with this country now that the war has ended unexpectedly early? If it is this that is causing the disturbance, perhaps both governments are at fault for not having cleared the ground previously, but certainly the primary responsibility for that rests with that party which is being embarrassed by the lack of any new arrangement now. For there is bound to be suspicion here that the matter was not brought up earlier in the hope that we would hold off termination pending new discussions.

• Nor, in the lend-lease termination, could there have been any question of cutting off the actual flow of supplies to Britain as of the official V-J Day. We have offered Britain the chance to purchase on cash or credit her share of lend-lease goods now left over. There are over \$1,500,000,000 of U. S.-owned nonmunitions goods in inventory here or overseas, and well over \$2,000,000,000 more of such materials on order or in production. Britain could get, at very least, \$1,000,000,000 of these essential supplies. It was allocated around \$2,200,000,000 of lend-lease aid for the year after V-E Day, some of which was still munitions. So Britain can be assured a minimum of six months' supplies for its civil economy—which is hardly a cut-off of physical shipments.

Britain does face a problem—which must in part be our problem—but that problem does not lie in the precise timing of the end of lend-lease. More broadly, it is how such countries as Britain, whose world financial and economic position has been greatly weakened by the war (BW-Dec.25'43,p112), can restore themselves to balance within a framework of free international trade and investment.

The British side of that problem was epitomized in Attlee's estimate that, just before the Japanese surrendered, Britain was importing "essential food and other supplies," quite apart from munitions, at the rate of \$8,000,000,000 (at most one-fourth from us) but was exporting to a total of only \$3,200,000,000.

• Even after British industry reconverts and resumes its exports, and even after Britain economizes on war-swollen imports of such products as petroleum, a deficit of international outgo over income will remain. On the average, it may be running on the order of \$1,000,000,000 a year until Britain achieves something like a 50% expansion of exports over prewar levels, which may take a considerable period—say, five years. This export rise is needed because the war has destroyed so much of Britain's income from sources other than exports—many ships sunk, foreign properties devastated, and investments abroad sold off and blocked sterling debts accumulated in order to purchase imports during the war (when exports had to be curtailed).

Of course, Britain can limit her unfavorable postwar trade balance by resort to import quotas, exchange controls, bilateral trade agreements, and similar devices. That is what makes London's problem our problem. And that problem then begins to involve Bretton Woods, the sterling bloc, postwar shipping, cartels and trade practices, rubber and tin, and a host of other matters.

• It is because such large, long-range world issues are involved—it might possibly be argued—that there has been a delay in discussions of new arrangements for the transition period to replace lend-lease. But it is precisely because of the vastness of this over-all postwar problem that the upset about the precise time of the ending of lend-lease seems out of all perspective. That issue is minuscule by comparison. However, there is enough disposition on both sides of the ocean not to face the large issues—as evidenced by that tie Senate vote a few months ago—for a major melee over a minor matter to be of real damage.

Lord Keynes' delegation is to arrive here this week for new conversations with American officials, and it will be best for all sides if Britain's real problems can now be presented openly and honestly, in an atmosphere cleared of gratuitous resentments and recriminations over trivial

part b
e precis
t is how
and eco
the wa
to bal
rade an

nized in
rrender
her sup
\$8,000
xporting

ames in
on was
a defic
On the
000,000
50% ex
y take
t rise in
of Bri
—many
invest
accumu
r (when

postwa
ge con
es. That
nd that
the ster
practices

issue
ere ha
for the
precisely
problem
ding of
issue is
ugh dis
ne large
months
of real

week for
will be
now be
cleared
r trivia

. 1, 1940

NE

X